LEVEL II

AD

(9) TECHNICAL REPORT, (12)

(14) NATICK/TR-81/004

(6) NEW SYSTEMS OF FOOD SERVICE MANAGEMENT FOR THE AIR FORCE.

BY

(10) P. BRANDLER
T.I. MATTUS
R.J. BYRNE

(16) 1L762724AH99A (17) AC

(12) 195

(11) SEP[redacted]79

UNITED STATES ARMY
[illegible] DEVELOPMENT LABORATORIES
[illegible] MASSACHUSETTS 01760

OPERATIONS RESEARCH AND
SYSTEMS ANALYSIS OFFICE

392 674

Approved for public release; distribution unlimited.

Citation of trade names in this report does not constitute an official indorsement or approval of the use of such items.

Destroy this report when no longer needed. Do not return it to the originator.

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER: NATICK/TR-81/004 — 2. GOVT ACCESSION NO.: AD-A101 187	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)*: NEW SYSTEMS OF FOOD SERVICE MANAGEMENT FOR THE AIR FORCE	5. TYPE OF REPORT & PERIOD COVERED
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): P. Brandler, T. Mattus, Jr., R. Byrne	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS: US Army Natick Research & Development Command, ATTN: Operations Research & Systems Analysis Ofc., Natick, MA 01760	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: 1L762724AH99A, Task AC 6.2
11. CONTROLLING OFFICE NAME AND ADDRESS: US Army Natick Research & Development Command, ATTN: Operations Research & Systems Analysis Ofc., Natick, MA 01760	12. REPORT DATE: September 1979
	13. NUMBER OF PAGES: 201
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	15. SECURITY CLASS. (of this report): UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for public release, distribution unlimited.

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

Military Service Requirement (MSR): USAF 7-1, Design and Test New Food Service Concepts for the Air Force.

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

Food Service Systems
Food Service Management
Enlisted Subsistence
Commercial Profit/Loss Contracting
Total Food Service System Costs
A La Carte Food Service
Food Service Contracting

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

This report presents a comprehensive analysis of feasible alternatives to current Air Force food services including appropriated and non-appropriated fund operations. The definition, development and analysis of each alternative is presented with a justification delineating the costs and benefits when compared to the current system. The alternatives range from one organization having complete responsibility for all food service operations on a base to minor changes and improvements in the current system.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

PREFACE

The Assistant Secretary of Defense (I&L) in his memorandum, dated 12 January 1974, to the Assistant Secretaries of the Services for Installations and Logistics (I&L) stated, "A realistic assessment of our present feeding system would be that it is not meeting the needs of our personnel. . . .It is requested that the services make a realistic assessment of their food service programs in light of the present situation and propose alternatives." The Deputy Chief of Staff of the Air Force (Systems and Logistics) formed a study group to develop the information necessary to comply with this OSD request. This study group recommended further study and the Operations Research and Systems Analysis Office (ORSA) of US Army Natick Research and Development Command (USANARADCOM) was tasked with Military Service Requirement (MSR) USAF 7–1, "Design and Test New Food Service Concepts for the Air Force." MSR USAF 7–1 required that a study of appropriated and non-appropriated food service operations within the Air Force be made to determine if a more cost effective system could be developed to meet operational and personal gratification needs within anticipated resources.

The authors would like to acknowledge the efforts of: Mr. Roger Merwin, Deputy Chief, Air Force Services Office, who was instrumental in coordinating our activities with many Air Force bases and commands, Mr. Joseph Wall of NARADCOM, who provided assistance in the data collection and analysis phases of the study, and Dr. Gerald Hertweck, Assistant for Army Combat Food Service Systems, NARADCOM, who provided valuable guidance in developing the initial concepts outlined in this study.

We would also like to acknowledge the efforts of the personnel at Travis AFB, whose cooperation was critical to the data collection efforts. In particular, we would like to thank Col Black, the Base Commander, and Col Trott, the Wing Commander, whose cooperation was invaluable, and LTC Hoskinson, Chief of Services, who personally assisted in coordinating our many efforts at Travis AFB.

Finally, ARA Food Services Co., retained under contract by NARADCOM as part of the overall effort, provided the detailed analysis of the feasibility of commercial operations on Air Force bases, and Mr. Robert Watson, the Project Manager, must be acknowledged for his dedicated and professional efforts.

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

LIST OF TABLES

LIST OF TABLES (Cont'd)

LIST OF TABLES (Cont'd)

LIST OF TABLES (Cont'd)

LIST OF TABLES (Cont'd)

NEW SYSTEMS OF FOOD SERVICE MANAGEMENT FOR THE AIR FORCE

INTRODUCTION

The concept of an Air Force installation is being drastically revised to reflect changes in the military/community support relationship. While the function of providing and serving food will remain, the methods of organization, operation, and management of facilities may have to be changed to achieve maximum utilization of facilities and personnel. A comprehensive analysis of the full range of food service operations at an Air Force installation was undertaken to obtain data on current operations, performance, and cost. This analysis defined the existing system to enable the development of recommendations for alternate systems which more effectively address consumer needs and/or yield cost reductions. The alternative concepts developed range from single organization managed and/or operated food services (including both appropriated fund and non-appropriated fund activities) to minor realignments in the present system.

The food service system in the Air Force is comprised of facilities operated by four organizations: the Appropriated Fund system, the Hospital, the Morale, Welfare and Recreation (MWR) Division, and the Army-Air Force Exchange Services (AAFES). Appropriated fund facilities are those operated with funds appropriated by Congress for the express purpose of subsisting enlisted personnel. The hospitals have facilities also funded by Congressional appropriations (typically operated, however, independently of all enlisted appropriated fund dining facilities) to service in and out patients and the hospital staff. The Morale, Welfare and Recreation (MWR) Division of the Air Force Military Personnel Center Headquarters at Randolph Air Force Base oversees the operation of the clubs (Officers, Non-commissioned Officers, and Airmen) and recreational activities, most of which offer food services ranging from small snack bars to complete cafeteria style restaurants. The Army-Air Force Exchange Service (AAFES) operates retail type stores and food service facilities, again ranging from snack bars to complete cafeteria style restaurants. These four organizations and the food services they provide on Air Force bases were all included in the scope of this analysis.

In order to assess the feasibility of various alternatives, it was necessary to select a site to collect detailed information to establish a base line. Travis AFB was selected as the data collection site because it is a large base and, therefore, offered both the typical and specialty types of food service under investigation, and included food service operations managed by all four organizations (Appropriated Funds, Hospital, MWR, and the AAFES) of interest. The entire population that has access to the Air Force base was considered within the scope of this analysis including active duty military (Officer and Enlisted), their dependents, and civilians employed on the base.

A complete range of feasible alternatives was considered, ranging from one organization having complete responsibility for all food service operations on the base to minor changes and improvements in the current system. Each feasible alternative is presented with a commentary on its advantages and disadvantages to the Air Force and a projection of associated savings or costs to the government. It should be noted that while some alternatives generate larger cost savings, in many instances these same alternatives require much greater reorganization

or even legislative action and, therefore, have a greater impact on current Air Force food service operations.

I. Single Manager Total Base Food Service Management

The alternative that integrates the food service operations on an Air Force base to the greatest extent delegates the responsibility for the operation of all base food services to a single organization. Considerable savings are thereby generated since there is a certain amount of duplication of effort in food service (basically, three organizations all serving the same population) on many Air Force bases. In order to reduce this duplication of effort and provide for some economies of scale, several organizations who have the capability of successfully operating all base food services were considered and their operations analyzed to determine the potential cost savings of single manager total base operations. It should be emphasized that any implementation of the single manager total base concept would involve the joint use of appropriated and non-appropriated funds. Great care would have to be exercised to insure that the cost accounting maintained the separation currently required by statute and regulation or efforts would have to be initiated to permit the co-mixing of these separate funds.

The Army-Air Force Exchange Service and a commercial firm were the only two organizations given serious consideration for complete responsibility of all base food services. The other organizations that offer food services on Air Force bases including the hospital, MWR, and appropriated funds were not considered as viable candidates.

In the case of the appropriated fund operations, this rejection was based upon, (1) a lack of operating skill and orientation on the part of the appropriated fund operations toward profit oriented operations with total system cost responsibility which might result in increased total system costs if all food service were placed under appropriated fund control especially when one considers, (2) the lack of familiarity with alcoholic beverage operation, a crucial element of the MWR operation in particular, and (3) a demonstrated trend on the part of the appropriated fund towards commercial operation of their food service. Specifically, 69% of CONUS air bases have some form of food service related contract for the appropriated fund facilities (45% for mess attendant services, 24% for full service).

The decision not to consider the MWR Division was due to the fact that the MWR operations had been experiencing a number of problems in their internal operations in the past and have only recently been able to come to grips with them. While a considerable improvement in the performance of the MWR system has been demonstrated, it was felt that the MWR operations had neither the capability nor the inclination to expand their responsibilities to encompass areas other than their own immediate and present concerns.

A. Army–Air Force Exchange Service

The Army-Air Force Exchange Service (AAFES) is an established military organization operating retail type stores selling consumer goods. In particular, they operate a variety of food service facilities ranging from snack bars to complete cafeteria style restaurants. The AAFES food program had world-wide sales of $192 million and CONUS sales of $99 million in FY 76; a program of considerable magnitude. Further, ARA Food Services Company, while

under contract to the US Army NARADCOM, had an opportunity to review the AAFES operations at the data collection site, Travis AFB, and they reported that the AAFES food operations were well-managed and efficient units. The conclusion, then, was that the AAFES was a large, relatively successful food service operator capable of accepting the responsibility for providing food services on Air Force bases.

NARADCOM contacts with AAFES Headquarters indicated, however, that they were not desirous at this time of increasing the scope of their food service operations. As a result, AAFES Headquarters was not interested in performing any feasibility study in order to project any possible potential cost savings of their assuming total responsibility for the provision of food services on an air base. While NARADCOM personnel could have performed a cursory analysis in order to project the potential cost implications of increasing AAFES food services, it was felt that without the detailed input of the AAFES regarding such expansion these cost projections would be questionable at best. Some consideration was given to the extrapolation of the results of a detailed analysis of commercial operation (as prepared by ARA Food Services Co. under contract to NARADCOM) to AAFES operation; and the results indicated savings to the Government in the millions of dollars. However, it was felt that even though it was expected that AAFES had the potential for performing in a similar fashion to a large experienced commercial operator, and that valid projections could be made for their operation of enlisted dining facilities, the presentation of lengthy detailed cost projections, particularly in any analysis of AAFES operation of clubs or hospital food service, would lend a possibly misleading note of absolute validity to the final results. Therefore, it was felt that confining the analysis of AAFES operation under the single manager total base food service concept to a verbal discussion was more appropriate. In a later section of this report, an analysis of the simpler more straightforward case of AAFES operation of the Appropriated Fund enlisted dining facilities is presented in quantitative terms.

In particular, two areas of concern with respect to AAFES operation of all base food services could significantly impact on the simple extrapolation of commercial contractor projections. First, AAFES has no real experience in the area of hospital food service, particularly the provision of patient meals. While this is a specialized area of food service expertise, it is not envisioned that this would represent an insurmountable problem to AAFES. That is, AAFES could hire technical operating experts in the field of hospital food services and their general management expertise in overseeing profit and loss operations and their total system cost orientation would facilitate the transaction. Second, although the AAFES has experience in alcoholic beverage operations, they do not have broad based experience in club-type operations. This again, is not an insurmountable problem. However, these factors imply that AAFES performance in these two particular areas would, most probably, be less successful than a contractor with experience in these areas. On the other hand, if AAFES did have the overall responsibility rather than a contractor, then all of the profits generated by the AAFES would accrue to the government as AAFES is a part of the government's operation. This situation is opposed to the case of a contractor single manager wherein only a portion of the profits would accrue to the government in the form of tax. The net result, therefore, might be that even though a contractor would be more successful and efficient in the absolute sense, with respect to the savings picture for the government, similar yields to the government might result.

In summary, the feeling on the part of the ORSA Office of NARADCOM is that in view of its past history of experience and success in the management of large scale food service operations, such an increase in the AAFES food service operation offers a potential benefit to AAFES, in particular, in increased volume and profits, and to the government as a whole in decreased costs. Unfortunately, the specifics of such cost savings and benefits will have to await such time as top management in AAFES is willing to invest the appropriate resources in considering and analyzing such a possibility. However, if the reader wishes a very general estimate of a readily achievable level of savings, the application of a factor of 75% to the savings projected for Profit/Loss Total Base Management contract operation should be appropriate.

B. Contractor Operations

The arena in which the greatest potential for cost savings to the government has been identified lies in contracting with large, experienced food service operators with demonstrated capabilities for providing high quality, profitable, well-managed food service in all of its aspects, but under a new concept of contracting vastly different from the current methods being employed by the Air Force. The key elements for the success of this proposal are: (1) that the contracts only be awarded to large, experienced food service firms and (2) that a new proposed contracting technique be utilized. Further, because the Air Force must maintain a training base of food service personnel for military contingencies and war, there is no intention to implement this proposal at all Air Force bases, but rather only at a number of selected bases. Arrangements could also be made with the contractor to train Air Force food service management and operating personnel at other sites for further support and development of the necessary training base.

The type of commercial P/L operation envisioned and proposed has been successfully used on large university campuses, as well as in industrial plants and in airports. For example, San Francisco State University, Ohio State University, Wright State University, and the University of Cincinnati have commercial firms who provide food service on a profit/loss basis on their campuses. These contractors are operating in what may be termed segregated markets (i.e., university campuses and airports) which have the potential for generating enough volume to support the food service operation. These bounded or segregated markets are directly analagous to the limited access community of an Air Force base.

The Air Force currently has food service contracts for mess attendants (KP) as well as for full food service operations. The type of food service contract currently utilized by the Air Force requires the contractor to provide management and labor while the government supplies food, utilities, equipment, and the building. The contractor is then paid a set fee for the services as long as a certain specified level of performance is met.

The concept of commercial profit/loss type contracting being suggested is totally different. First, rather than having contractors bid on how much of a fee they will charge the government and choosing the low bidder, contractors will bid on how large a percentage of their gross sales they will provide the government for access to the market and the high bidder will be chosen. Further, the commercial firm will have total responsibility for all aspects of the operation of food services including management, labor, food, utilities, equipment, etc. The

success of the operation and the amount the contractor earns will depend entirely on the contractor's ability to attract enough customers to generate profits over and above the required reimbursement to the government. The contractor in this instance will be truly motivated to offer the quality of food and service in demand by base personnel. In effect, the consumer should be able to get the same food services he or she used to go off the base to obtain. The military will benefit since income will be generated (as fees paid by the commercial firm to the government as a form of rent or as a royalty for the right to operate on the base) and the only expenses to the military will be the reimbursement cost for the meals consumed in the commercial facilities by enlisted personnel who subsist on SIK. Commercial profit/loss operation of all base food services will also relieve the Air Force of the day-to-day headaches of operating food services over and above the amount required to maintain a training base for military contingencies. Further, by incorporating a requirement for a program of training for military food service personnel into the contract, the Air Force will be able to enhance the training of blue-suit food service personnel as well as provide a motivational tool for attracting and retaining its food service personnel.

The operation of all base food services by a commercial firm does present some drawbacks. First, commercial profit/loss operation under the single manager total base concept may require significant changes vis a vis the separation of appropriated and non-appropriated fund activities. Second, if all Air Force bases implemented any form of commercial operations, the Air Force would no longer have any Air Force personnel trained as cooks. As previously noted, this single manager concept is envisioned for limited implementation at selected bases. A third problem will result if commercial firms only bid on large bases in good locations. That is, the commercial firms may not bid on small bases or bases located in remote isolated areas. If this were to happen, then the cadre of trained cooks would have to be stationed only at small isolated bases. This would certainly lower the morale of Air Force military cooks. This problem might be solved by requiring a contractor to bid on two bases. One of the two bases would be located in a remote area and the other would be a larger base in a desirable location.

Admittedly, these problems present some potential drawbacks to commercial P/L operation of all base food services, but it is expected that they could be resolved satisfactorily. In any event, the advantages of commercial P/L operation appear to outweigh the disadvantages.

In order to prepare a valid picture of a commercial firm's operation of base food services, NARADCOM personnel contracted, under competitive bid, with ARA Food Services Co., one of the largest and most successful food service management corporations. The following discussion, and all further discussions involving commercial profit/loss operation of any aspect of military food services, is based on ARA's assessment (refer to Appendix A for details) of how a commercial firm could and would operate base food services under the proposed contracting method and the associated scenario.

The specifics of single manager total base commercial contractor P/L operation are relatively straightforward. A contractor would provide all food services on an Air Force base and pay the government a percentage of the gross sales for this privilege. The distribution of receipts to the government would be a matter of negotiation between the concerned parties (AAFES,

MWR, Appropriated Fund and Hospital) (refer to Apendeces B, C, D, and E for details). The facilities would be operated on a profit loss basis and be open to all customers, military and civilian. The contractor would utilize all existing facilities (appropriated fund, MWR, and AAFES) and develop proposals for Air Force approval to create and open, and operate new facilities. Similarly, the Air Force will entertain proposals to close existing facilities that are not profitable when operated under the profit/loss concept.

The operator may offer any type of food service at any time subject to several limitations. The operator must, at a minimum, operate cafeterias offering complete meal service in locations convenient to where appropriated fund dining halls currently exist for the regular three meals a day, Monday through Friday. The meals offered in these cafeterias will be required to meet or exceed the DoD Food Standard of Excellence for nutrition and customer acceptance. The DoD Standard of Excellence is a measure of the quality and level of food services currently offered in the US Air Force appropriated fund facilities. The menus of potential contractors will be compared to the Air Force World Wide menu to determine if they meet or exceed the current Air Force nutritional and consumer preference level.

The contractor will be reimbursed for all of his food service offerings in proportion to the number of customers and what they consume. Records of the numbers of customers and what they consume will be collected at the cash register. The civilian and military customers who do not get meals as part of their pay (non-SIK types) will reimburse the contractor for what they have taken at the cash register at the contractor's predetermined and posted prices. It should be noted that this requirement for airmen on BAS (Basic Allowance for Subsistence) to pay **full meal costs** contrasts with the current practice of only charging **raw food costs** in Air Force dining halls. The military customers who are authorized meals as part of their pay (Subsistence-In-Kind or SIK) will identify themselves at the cash register at the time their purchases are rung up by presenting their meal cards and their identification numbers will be punched into the cash register memory along with what they selected, the date, and the meal identification. These cash register records will then be used by the Government for weekly or monthly reimbursement to the contractor.

One of the problems of concern with the reimbursement method mentioned in the preceding paragraph is that customers who get free meals (SIK's) can abuse the system by taking more food than they are authorized. A practical solution to this problem would be to have each customer who is authorized free meals pay the difference between the cost of what he takes and a pre-set standard meal allowance, as he stands at the cash register. The meal allowance limit could be established for a set time period by using the official Basic Daily Food Allowance (BDFA) for a particular meal period as the food cost and adding to it a cost increment which would be based upon the ratio of contractor labor and overhead costs to the total costs, plus a reasonable profit (see Appendix F for a complete description of this system). For example, if the contractors' records show that 35% of total costs are labor and overhead costs, if the BDFA allowance for lunch is one dollar, and if the contractor is allowed a 5% profit, the meal allowance limit would be set at $1.67 (i.e., if x = limit, then $x = 1.00 + 0.35x + 0.05x$ and therefore, in this example, $x = 1.67$). A limit would be established for each meal period (breakfast, lunch, and supper) and could be revised every fiscal quarter, etc. This approach is a simplistic one, which has some unusual consequences

when carried to an extreme. To elaborate, it should be noted that since the food allowance per individual is set at a constant rate, the BDFA, total food costs for SIK patrons is a variable cost, varying with the attendance rate for SIK's. Total labor and overhead costs, on the other hand, are relatively fixed costs. Therefore, if SIK attendance drops, then the relatively fixed labor and overhead costs become a larger percentage of the contractor's total costs. That is, with lower attendance rates there are fewer customers over which to distribute the fixed overhead and labor costs. The result is that the total cost per SIK customer to the government can increase with decreasing attendance rates to the point where it may cost more for the government to feed fewer SIK's. An example of just this sequence of events will be presented later in this section wherein restrictions placed upon the contractor with respect to providing new and renovated facilities result in lower attendance rates. This problem can, however, be avoided by negotiating the allowed ratio of labor and overhead costs to total costs to be used in establishing the reimbursement rate, and holding that percentage fixed within relatively narrow limits for the duration of the contract.

In summary, under this system, the contractor would be reimbursed as follows:

- In cash at the cash register for the total price of the customer selections for customers who are not authorized free meals. Note, BAS customers will be paying total meal costs and not only raw food costs as is current practice in Air Force dining halls.

- Monthly or weekly by the Government for the actual price of selections for customers who are authorized free meals (SIK's) up to the standard preset meal allowance price.

- In cash at the cash register for the difference between the total price of the customers selections and the present meal allowance by the customers who are authorized free meals (SIK's).

The contractor will be in business to make a profit. His success will depend upon attracting enough customers, having the customers purchase enough of the offerings when they come, and insuring that the total costs of providing service to the customer, including the reimbursement to the government, is sufficiently less than the prices charged to insure that corporate profit margins are met or exceeded. It should be noted that a self-imposed maximum would be set on the contractor's prices due to the drop in attendance and associated profit he will experience from any overpricing.

A considerable change in food service operations with respect to current operations can be expected. If the contractor is experienced in total food service systems management and the overall potential customer market is sufficient, resounding success should be expected. Under these conditions, Air Force personnel and civilians will experience all the benefits usually associated with a free enterprise system of food outlets driven by profit incentives. That is, base personnel can expect a variety of food outlets and a variety of service and operating hours within these food outlets. All of these benefits in variety will be motivated by the necessity for the contractor to meet the dynamic needs of the customer and market place. Since price is a critical enticement or detraction to the customer who has to pay at the cash register, a successful operation can be expected to offer the customers reasonable prices

consistent with or lower than prices for the same service outside the base. In fact, it might be expected that an experienced and successful contractor will take advantage of the factor of convenience of being on base with the substantial number of customers to charge lower prices than would be expected outside the base to reap the full benefits of high volume operations. Moreover, the freedom of access to all food outlets on an Air Force base to all military and civilian customers should produce at least two major benefits. The enlisted personnel who get meals as part of their pay (SIK's) will be able to obtain this food service at any outlet on post at any time it is open. This will provide significantly increased operating hours, variety, and opportunity for these customers to obtain the food part of their benefit package. It is expected that this freedom of access will significantly increase the overall attendance of these personnel thereby increasing the cost to the government. However, the increased morale associated with increased participation in an improved food service operation should be well worth this kind of reinvestment of some of the savings which will accrue to the government through implementation of this new customer oriented, profit motivated management system. The other major benefit is the access for all civilian and military personnel to the dining halls which were formerly restricted to enlisted personnel. This will allow all personnel to eat and mingle at any open food outlet except for those with club membership requirements. This will improve food service convenience and opportunities for all personnel.

On the other hand, if a contractor does not have good total systems management experience and capability, a different projection would have to be made. For example, a contractor who would make no attempt to study and determine the total market potential in order to create new and innovative food services on-base would probably operate in the current mode and only provide the same services now being offered. In this case, the expectation would be little improvement, other than unlimited access to all facilities, for the customer and a **status quo** operation. A good journeyman non-innovative contractor such as this can be expected to operate the total system on a satisfactory basis and remain profitable with reasonable prices and reasonable profit margins. If this contractor, however, has marginal or less than marginal management capability, system failure can be expected. Particularly in the institutional or lower priced food service market, success is most often associated with good management rather than good cooking abilities. Without good management and successful innovations to meet customer needs, institutional food systems either survive precariously, or on a subsidized basis with the subsidization increasing until failure occurs. Managers of these systems usually pursue a policy of increasing prices to customers to cover uncontrolled costs until customers stop coming and the system fails. Based upon the above, it is clear that the selection procedure must be established to insure that only contractors with proven managerial capabilities are considered. The goals of improved performance for the customer and reduced costs to the government can only be achieved by selecting and employing a good contractor to provide total food service at an Air Force base.

The Air Force should offer open solicitations to all parties who are interested in providing the total base profit/loss food service operations. The AAFES, as well as any other military food service organization, should be allowed and encouraged to bid along with the commercial food service companies who are interested. The Air Force would review all the solicitations and select organizations that will provide the highest level and most appropriate variety of food services at the most reasonable cost (or greatest cost savings).

The results of market surveys conducted independently at Travis AFB by USANARADCOM and ARA Food Services Co. identified base population demands for several types of food and service not currently offered. In order to meet all the base food service requirements, therefore, new types of food and service would have to be offered (see Appendix G for details).

Three options were considered relating to the construction of new facilities or renovation of existing facilities required to provide all the types of food and service demanded by the base population. The first option assumes the creation of new facilities and the renovation of some existing facilities with the expense being borne by the contractor. The second option also assumes the creation of the new facilities, but the government provides the necessary funding. The third option retains the current system in a **status quo** position and creates no new facilities to better meet the base population food service demands.

There are advantages and disadvantages associated with each of the three possible options. Option 1, by requiring the contractor to bear the expense of the renovation or construction of new facilities places more of the financial responsibility for the success of the system on the contractor. However, due to this increased financial responsibility, a longer contract period would be required for the contractor to amortize his expenses and the reimbursement to the government would be a lower percentage of the gross sales. Under the second option, the government accepts the financial responsibility for new food services, but since the contractor has less invested, a shorter contract period would be permitted. Also, as the contractor will not have to amortize any large expenses, a higher reimbursement (percent of gross sales) would be paid to the government. This option would probably be impractical, however, because of the lead time, coordination and approvals required by the government MCA program. We have, however, included this option for completeness. The final option, number three, retains the present system in a **status quo** position with no new facilities being renovated or constructed. There is less risk for the government and the contractor associated with this option since there is no large investment required. However, the disadvantage of this option is that since there will be no new food services offered, all the base population food service demands will not be met. This is important because the addition of new food services will undoubtably raise the morale of the base population. Further, this option will result in a lower volume of business since base personnel will continue to leave the base to satisfy part of their food service desires and, therefore, a lower reimbursement to the government will result. In addition, as has been pointed out previously, due to the relatively fixed nature of labor and overhead costs, having fewer customers over which to distribute these costs may result in higher costs to the government for SIK meals.

An extensive analysis of the potential monetary benefits of total base single manager commercial contractor profit/loss operation of all base food services was conducted at Travis AFB. The results indicate that significant cost savings can be projected under each of the three options when compared to the current system. As has been previously referenced, the development of these cost projections for commercial operation was accomplished by ARA Food Services Co., under contract to and under the direction of the ORSA Office of US Army Natick R&D Command. It was felt that such an approach would yield more valid results than any analysis performed by either of the parties independently.

Before discussing the specific cost savings associated with these three options, it seems appropriate to mention in general terms the new facilities and operations that ARA Food Services Co., based upon its market surveys and analyses as well as those performed by Natick R&D Command at the Travis site, has recommended (see Appendix G for a complete discussion). Two new facilities, a stand alone fast food type restaurant called Pasquale's Tamale, and a night club to be called the Travesty, were recommended as were major renovations to the three appropriated fund dining facilities and more modest renovations to the clubs, and a small AAFES snack bar. Pasquale's Tamale, to be associated with the appropriated fund operation, will feature home style pizza and Mexican food. It will be created in a currently empty, centrally located building after renovating and enlarging the structure. The concept involves utilizing a bright, attractive decor, with matching signs inside and out, to make it easily identifiable with fast food. The facility will have 75 seats and include counter-type ordering as well as take out and delivery service. This operation should appeal to young enlisted personnel, young families, and, generally, to people **on the go**. The Travesty night club, to be associated with the MWR operation, will serve as the ultimate entertainment establishment on the base. The Travesty, to be centrally located near the female housing area, will be a disco night club featuring recorded music and dancing. Its nearest rival is 50 miles from the base. The club will operate only in the evenings and will feature sandwiches, snacks, as well as complete liquor service. In addition to dancing, a moving light show will be featured as will a separate lounge area for those interested in electronic games. This 328 seat facility will incorporate mirrored walls and mylar wall graphics to provide a highly contemporary atmosphere. In addition to these two new facilities, the three enlisted dining facilities will each be remodeled to provide hamburger and sandwich type fast food as well as standard cafeteria offerings on a random scatter serving line in a highly contemporary setting. In addition, one section of each building will be set aside for a chicken shack which will provide the equivalent of a Kentucky Fried Chicken operation. This chicken shack will be located along an outside wall so that the main dining areas can be closed off and the chicken shack can then operate as a take out operation providing extended hours of service. A less extensive remodeling program will be carried out in the Officers and NCO clubs. The clubs would still be operated on a private membership basis during the day, but would be open to the public during night operating hours. Finally, some minor remodeling of the Galaxy Amusement Center, under the AAFES profit center, is also included. Except for option 3, which does not provide for renovation or expansion, the costs of renovating and creating these facilities was included in the cost analysis which follows.

Table 1 presents the summary cost analysis results for the three options using reimbursement rates assumed by ARA (i.e., 1% of gross sales under option 1, 5% of gross sales under option 2, and 5% of gross sales under option 3). As the summary indicates, there are three basic costs under this new method of contracting that the government must bear under all three options, and a fourth cost that it must bear under option 2. The largest of these costs is the cost of meals served to personnel who subsist on SIK. As previously stated, the contractor will feed these people and then be reimbursed by the government for the cost of these meals. ARA Food Services Co. made two assumptions in making the projections as to the magnitude of these costs (see Appendix D). First, they assumed that SIK personnel may only use their meal cards in enlisted dining facilities under the appropriated fund center. In our view, this is too restrictive an assumption. Since the cash register mechanism for keeping track of SIK accounts should permit these SIK personnel to utilize any of these

Table 1

A New Method of Contracting for Total Base Food Services
(ARA Selected Reimbursement Rates)

	Option 1[a]	Option 2[b]	Option 3[b]
Appropriated Fund:			
Net Cost of Current Operation (less BAS Reimbursement)	$3,691,507	$3,691,507	$3,691,507
Less Cost of Contractor Provided SIK Meals	2,608,159	2,608,159	2,876,347
Less Contract Administration Cost	55,000	55,000	55,000
Less Annualized Air Force Investment Cost	–	546,171	–
Plus Reimbursement to Air Force	47,111	235,552	204,963
Net Savings To Air Force	$1,075,459	717,689	965,123
Hospital:			
Net Cost of Current Operations	1,530,937	1,530,937	1,530,937
Less Cost of Contractor Provided Patient Meals*	606,192	606,192	606,192
Plus Reimbursement to Air Force	39,972	39,972	39,972
Net Savings to Air Force	964,717	964,717	964,717
AAFES:			
Government Profit, Current Operations	189,133	189,133	189,133
Less Contract Administration Cost	10,000	10,000	10,000
Less Annualized Air Force Investment Cost	–	8,217	–
Plus Reimbursement to Air Force	58,804	66,581	66,581
Net Savings to Air Force	(140,329)	(140,769)	(132,552)
MWR:			
Current Loss of Current Operations**	(236,320)	(236,320)	(236,320)
Less Contract Administration Cost	21,000	21,000	21,000
Less Annualized Air Force Investment Cost	–	117,692	–
Plus Reimbursement to Air Force	73,380	142,338	77,733
Net Savings to Air Force	288,700	239,966	293,053
Total Annual Projected Air Force Savings	2,188,547	1,781,603	2,090,341
U.S. Government Taxes on Corporate Profits***	46,398	230,169	179,360
Total Savings to the U.S. Government	$2,234,945	$2,011,772	$2,269,701

*This cost includes all patient meals and the costs recouped by cash meals from some patients (BAS, Officers & Dependents) who are billed for subsistence.

**Based on ARA's analysis, which, due to different accounting procedures, may differ from the MWR Profit/Loss statement.

***The U.S. Government taxes indicated are based on projected profits and corporate tax rates for 1978 from "The Tax Bite" by Irving L. Blackman in Restaurant Business, February 1, 1979.

[a]1% Reimbursement Rate

[b]5% Reimbursement Rate

facilities on the base without undue accounting problems for the contractor, all food outlets should be open to SIK customers for meal card utilization. This freedom of access naturally would have an impact on the attendance rates for SIK personnel, increasing them to levels above those assumed in making these cost projections. This naturally would increase the cost to the Air Force for SIK meals, and reduce the amount of savings projected for the various profit centers in Table 1.

The second assumption that ARA made in these projections was that the attendance of SIK personnel in the appropriated fund facilities would remain the same under each option even though they assumed that the cash sales volume would decrease under option 3 since the new and renovated facilities would not be created. The result of this assumption, as has been explained previously, is that the reimbursement rate per SIK meal is higher under option 3 because there are fewer total customers to absorb the fixed costs. Therefore, ARA projected an increase in the total annual reimbursement for SIK meals under option 3 of 10% from the level under options 1 and 2, even though the number of meals being reimbursed for remains constant. Again, the ORSA Office of the Natick R&D Command would have to take exception to this particular assumption in that there is no reason to believe that the SIK personnel will be immune to the attractions of the new and renovated facilities if the other segments of the population are not, and, therefore, the total number of SIK meals should be higher under options 1 and 2 than under option 3.

What is proposed to rectify these latter two ARA assumptions is to assume that the ARA assumed 56% attendance rate for SIK's holds for option 3 with SIK's having meal card privileges at all the base service outlets, and that the effects of increases in SIK attendance over the baseline option 3 attendance rate (56%) be considered under options 1 and 2 to reflect the addition of the new and renovated facilities. This 56% baseline attendance rate, which is 50% higher than the 37% attendance rate for SIK's under the existing system at Travis AFB in second quarter FY 78 (as determined by ARA), reflects the effects of the unlimited access to all base facilities as well as the innovative, profit oriented management of the contractor. The results of this analysis and its impact on the data presented in Table 1 is presented after the basic discussion of the results summarized in Table 1.

Another cost associated with the new contracting method, as with any contractual operation, is the cost of an Air Force contract management office to oversee the contractor's operation to insure that adequate levels of performance are being maintained. This annual cost ($55,000) is assumed to be the same in all three options.

The third cost assumed to be absorbed by the Air Force is that of patient meals. However, even though the Air Force will have to reimburse the contractor for these patient meals, the Air Force may still bill certain patients (BAS, Officers and Dependents) for the subsistence they receive while in the hospital. Therefore, a portion of these costs will be recouped.

The fourth cost, which the government must absorb only under option 2, is the cost of the investment required to renovate and create new facilities and operations. This investment, which amounts to $4,946,500, is equivalent to an annualized investment cost of $672,080 which is distributed over each of the profit centers under option 2 as indicated in Table 1. This sizeable investment naturally poses the problems of any military construction project.

That is, the problem of securing budget approval for the construction with the attendant long lead times and voluminous paperwork necessary for securing appropriate approval as well as the highly uncertain nature of actually being able to secure the approvals. In fact, if the contractor suggests renovations requiring MCA funds if the government is to take the responsibility for construction, then the approval lead time required for MCA projects precludes the award of this type of contract in any timely manner. These latter facts are a strong argument in favor of pursuing option 1 over option 2, since the contractor would not be under such pressures or requirements. That is, realistically option 2 is only feasible in situations where the renovations are so minor as to be possible without MCA funds. For bases requiring more elaborate construction and renovation, option 1 is the only option of the two which is valid, unless the contract can be awarded for status quo (option 3) operation until MCA approval is received and construction is completed, where upon the contract converts to option 2 type operation.

The potential benefits to the government in general, and the Air Force in particular, over and above the decrease in operating costs for each of the food service operations, comes in two forms. The first benefit is the fact that the contractor will pay the Air Force a percent of gross sales for the right to do business on the Air Force base, and this will be direct income to the Air Force. The amount the contractor pays the Air Force naturally varies for each of the three options. The first option, where the contractor provides the funds for the renovations, would naturally yield a lower reimbursement rate (assumed by ARA to be 1% of gross sales) due to the contractor's amortization expense for the renovations. In the second option the government funds the costs of renovations and, therefore, the reimbursement is considerably greater (assumed by ARA to be 5% gross sales). Finally, the contractor reimbursement to the government under option 3 was also projected by ARA at 5% of gross sales, since the contractor, again, does not have the amortization expense for renovation and construction. It will be noted that even though ARA has assumed an equal level of reimbursement (5% of gross sales) for both options 2 and 3, the actual amount of money reimbursed to the government under each of these two options differs (see Table 1). This is the natural result of the fact that total food service sales under option 3, which does not address the full range of food service demands of the base population by not creating and renovating new facilities, is not as great as those under option 2. In fact, it was projected by ARA that total sales would drop from a level of approximately $9.2 million under option 2 to $8 million under option 3. (The projected Profit/Loss statements for each profit center may be found in Appendix H).

Finally, under all of the options, there is an additional benefit to the government in general, although not directly to the Air Force, that relates to the revenue to the government from taxes on corporate profits. This latter point in particular may lead to a different ranking of the options depending upon the viewpoint taken (Air Force or Government in general). That is, with respect to the total annual projected Air Force savings, the option providing the greatest amount of savings is option 1 in which the new facilities are created, but the investment cost is borne by the contractor. The second ranking option is option 3 in which no new facilities are created, and the lowest ranking option is option 2 in which the new facilities are created, but the government must make the investment. On the other hand, when the viewpoint taken is that of the government as a whole (i.e., the tax on corporate profits is included), the relative rankings of options 1 and 3 reverse, and option 3 is marginally

the most cost advantageous. It must be strongly emphasized here that the relatively high level of savings under option 3, **status quo** conditions, may be a phenomenon unique to bases like the Travis test site with a relatively wide choice of modern, attractive facilities. At bases where the facilities are less extensive and less satisfactory in their existing condition, the possible volume of business without renovations and the inauguration of new operations might be prohibitively low. As a result, an RFP might fail to attract the kind of commercial contractor necessary for the success of the concept and, even if one could be found, the level of cost savings of option 3 with respect to the two options which renovate and expand the food services provided would be more significantly lower than is the case here.

As pointed out previously, the reimbursement rates used in the projections in Table 1 for the three options (option 1 – 1%, option 2 – 5%, option 3 – 5%) were chosen by ARA Food Services Co. NARADCOM personnel in conducting this study visited several universities, including Ohio State University and San Francisco State University, which have commercial firms providing food services on a profit/loss basis on their campuses. The reimbursement rates for the various commercial P/L operations on these campuses averaged between 10% and 15%.

An analysis of increasing the reimbursement rate paid to the Air Force by the contractor was prepared and is summarized in Table 2. In this analysis, the reimbursement rate selected by ARA was doubled and then tripled in order to determine the sensitivity of the total government cost savings and the contractor's profits to the reimbursement rate. As one would expect, an increase in the reimbursement rate does increase the revenue to the Air Force. However, this increase in revenue must be derived from the contractor's profits. This factor has two implications. First, the reduction of contractor profits reduces the taxes paid to the U.S. Government. Second, if the reimbursement rate is raised to a point where the contractor's profits are reduced to a level where loss occurs, that particular profit/loss scenario then becomes non-feasible since no profit oriented contractor will bid on any operation where he would expect to lose money.

The results of this analysis indicate that the reimbursement rate of 1% under option 1 is probably at its maximum feasible level. However, the reimbursement rate under options 2 and 3 could be doubled to 10% with the contractor continuing to generate profits and the U.S. Government increasing its total savings by 11% under option 2 and by 8% under option 3. However, the low level of profits projected with the 10% reimbursement rate raises some doubt as to whether the kind of contractor that is required to make a success of this concept would offer such a reimbursement rate in response to an RFP.

As discussed earlier, ARA assumed in their analysis that the SIK personnel would only be allowed to eat for free in the appropriated fund facilities. It was noted that a mechanism exists to permit open access for SIK's to all facilities. Moreover, if SIK personnel were allowed to subsist with their meal card in all base facilities, except for the closed membership clubs, this would boost morale and make the system more attractive from the SIK personnel viewpoint. The net result would be that SIK attendance would increase. The proposal was made to consider the ARA assumed constant SIK attendance rate of 56% to be the option 3 (status quo)

Table 2

Total Projected Savings of Total Base Management with Different Reimbursement Rates

	ARA Selected Reimbursement Rate	Increased Reimbursement Rate	
		100% Increase	200% Increase
Option 1:			
Reimbursement Rate	1%	2%*	–
Net Annual Projected Air Force Savings at 1%	$2,188,547	$2,188,547	–
Plus Increased Reimbursement Over 1%	0	219,267	–
Corporate Profits (Loss) At Assumed Reimbursement Rate	116,462	(102,805)	–
Plus Corporate Taxes (Tax Loss) On Profits or Losses at the Assumed Reimbursement Rate	46,398	(49,346)	–
Total Savings to the US Government at Assumed Reimbursement Rate	2,234,945	2,358,468	–
Option 2.			
Reimbursement Rate	5%	10%	15%*
Net Annual Projected Air Force Savings at 5%	1,781,603	1,781,603	$1,781,603
Plus Increased Reimbursement Over 5%	0	484,443	968,886
Corporate Profits (Loss) at Assumed Reimbursement Rate	577,734	93,291	(391,152)
Plus Corporate Taxes (Tax Loss) On Profits or Losses at the Assumed Reimbursement Rate	230,169	37,167	(187,753)
Total Savings to the US Government at the Assumed Reimbursement Rate	2,011,772	2,303,213	2,562,736
Option 3:			
Reimbursement Rate	5%	10%	15%*
Net Annual Projected Air Force Savings at 5%	2,090,341	2,090,341	2,090,341
Plus Increased Reimbursement Over 5%	0	389,249	778,498
Corporate Profits (Loss) at Assumed Reimbursement Rate	450,201	60,952	(328,297)
Plus Corporate Taxes (Tax Loss) on Profits or Losses at the Assumed Reimbursement Rate	179,360	24,283	(157,583)
Total Savings to the US Government at the Assumed Reimbursement Rate	$2,269,701	$2,503,873	$2,711,256

*After initial indications of corporate loss higher reimbursements are not feasible.

attendance rate with unlimited access for SIK's to all facilities and to analyze the sensitivity of the Table 1 cost savings to increases in SIK attendance under options 1 and 2.

In order to perform this sensitivity analysis, NARADCOM personnel selected SIK attendance increases under options 1 and 2 of 10%, 20% and 30% above the baseline SIK attendance rate of 56%. ARA projected a 67% increase in BAS attendance rates from 6% under option 3 to 10% under options 1 and 2. This large increase is possible because the net attendance rate for BAS customers is low. For the SIK situation, with its relatively high baseline attendance rate, the 30% increase in attendance rate seems to be the maximum increase that can conservatively be projected, as this yields a final SIK attendance rate of approximately 73%.

Before proceeding with the results of this analysis, a few comments are in order. Specifically, ARA had considered in their calculations SIK attendance at facilities other than the appropriated fund dining halls, but in a non-reimbursable manner. That is, even though the SIK's would be permitted to utilize their meal card to eat for free in the enlisted dining facilities, they would be cash customers in the other facilities. The effect of this ARA assumption is that the overall attendance rates for SIK's in all base facilities would be in excess of the 56% rate even though the government is billed on a reimbursable basis only for the 56% attendance rate in the appropriated fund enlisted dining facilities portion. In conducting our analysis, it has been assumed that under option 3 the net attendance rate for SIK's in all available food service facilities, as well as the attendance rate for billing purposes are both 56%. The premise for this assumption, as previously noted, is that unlimited access to all base facilities and the innovative, volume/profit orientation of the contractor would result in a 50% increase in attendance rates (to 56%) for SIK personnel over the 37% attendance rate they demonstrated under the existing Travis AFB system. By then considering a range of attendance rate increases under options 1 and 2 of 10%, 20%, and 30%, one can get a feeling for the sensitivity of the savings under these options resulting from SIK attendance increases due to the new and renovated facilities without the necessity for trying to determine explicitly the percentage of the cash customer attendance ARA assumed in their analysis to be SIK customers. That is, it will be assumed that the 10%, 20%, and 30% increases in SIK attendance rate imply new business not considered by ARA in their analysis. The net result would, therefore, be (1) an increase in the reimbursement responsibility on the part of the government for the additional SIK meals, offset somewhat by, (2) an increase in volume which will add to the contractor's profit picture as well as increasing the revenue to the U.S. Government in the form of taxes. The increased profits resulting from this new volume were calculated at ARA's anticipated 6% profit objective.

The primary observation (see Table 3) is that the option with the lowest SIK attendance rate, option 3 (**status quo**), generates the greatest savings. This is to be expected since the fewer SIK's fed, the cheaper the system to the government. Carried to the extreme the absolutely cheapest system is one which discourages all SIK's from eating. That is, the benefits of increased morale and satisfaction engendered under options 1 and 2, which improve the system, cost money, and the more popular and well received the system, the more it costs. But as one can see (from Table 3) as SIK attendance increases, the total cost increases but at a lesser rate (i.e., a 10% increase in SIK attendance results in less than a 10% increase in total SIK meal costs). This occurs because, as the gross attendance increases, the fixed

costs are spread over a larger volume, decreasing the cost per meal. Further, it may be noted that the actual SIK attendance rates that result from a 10%, 20%, or 30% increase in SIK attendance under options 1 and 2 are all reasonable. A 10% increase in SIK attendance will result in an effective SIK attendance rate of 61.6%. This is reasonable though conservative, since the SIK personnel would now have at their disposal a complete range of modern, attractive, food service facilities in which they may eat for free. At the other end of the scale, a 30% increase in SIK attendance will result in an effective SIK attendance rate of 72.8%. Admittedly, this rate may be optimistically high; however, even at this high rate, each option under Total Base Profit/Loss Management continues to generate over two million dollars in savings over the conventional system at Travis AFB with a 37% SIK attendance rate. Finally, it should be noted that increases in SIK attendance do not change the relative rankings in terms of total cost savings of each of the three options; that is, option 3 always generates the largest savings and option 2 the smallest. It must be reiterated that the large savings under option 3 is significantly related to the fact that SIK attendance is lowest under this option.

In the final analysis there are some very important trade-offs to be noted. The first option in which the contractor assumes the risk of investment naturally provides for a lower reimbursement rate as a percentage of gross sales, but eliminates all of the headaches associated with governmental funding of such renovations and construction. More importantly, however, it more intimately involves the contractor in the operation and maximizes his motivation towards making a success of the overall operation. The third option, which retains the present food service facilities in a **status quo** position, has the advantage of less financial involvement for both the contractor and the government, the highest level of cost savings, and naturally is the most easily implemented, however, it does not address the total food service needs of the base (e.g., lower SIK attendance), and the success and the level of cost savings that accrue to it are a strong function of the present extent and condition of the food service facilities available on the base in question. The second option in which the government makes the investment poses the problems of securing approval for MCA projects if renovation at that scale is required. The difficulty in securing approval in a timely manner may preclude consideration of this option. On the other hand, this second option will allow a shorter contract period since the contractor will not have to amortize the expense of renovation and construction. This will provide for more frequent active competition and reduce the risk of any long term association with a marginal performer.

One final point that may be noted from the analyses summarized in Table 1 is that the most significant dollar changes are in the appropriated fund operations. With this fact in mind, a later section of this report addresses the impact of contractor P/L operation solely of the appropriated fund dining facilities.

II. Dual Management and Operation of Base Food Services

It must be admitted that there may be one or more Air Force organizations that have no desire to either expand or relinquish control of their food service functions. The Army and Air Force Exchange Service, in particular, after agreeing to conduct a feasibility study of expansion of their food services as part of this effort decided not to do so, and indicated no desire at this time to relinquish operating control of its food service business. It would appear that AAFES personnel would like their food service operations to remain in a **status**

Table 3

Projected Savings of Total Base Management with Increased SIK Attendance Rates

		Option 3	
1.	Profit/Loss Operation of the Status Quo System (Attendance = 56%)		
A.	SIK Reimbursement Cost	$2,876,347	
B.	Total Savings	2,269,701	
		Option 1	**Option 2**
2.	10% Increase in SIK Attendance (61.6%)		
A.	Savings at the 56% Attendance Rate Level	2,234,945	2,011,772
B.	SIK Meal Cost Increase	172,625	172,625
C.	Increased Air Force Reimbursement	1,726	8,631
D.	Increase in Taxes on Corporate Profits	4,126	4,126
E.	Total Additional Cost	166,773	159,868
F.	Total Savings	2,068,172	1,851,904
3.	20% Increase in SIK Attendance (67.2%)		
A.	Savings at the 56% Attendance Rate Level	2,234,945	2,011,772
B.	SIK Meal Cost Increase	335,044	335,044
C.	Increased Air Force Reimbursement	3,350	16,752
D.	Increase in Taxes on Corporate Profits	8,009	8,009
E.	Total Additional Cost	323,685	310,283
F.	Total Savings	1,911,260	1,701,489
4.	30% Increase in SIK Attendance (72.8%)		
A.	Savings at the 56% Attendance Rate Level	2,234,945	2,011,772
B.	SIK Cost Increase	498,444	498,444
C.	Increased Air Force Reimbursement	4,984	24,922
D.	Increase in Taxes on Corporate Profits	11,914	11,914
E.	Total Additional Costs	481,546	461,608
F.	Total Savings	$1,753,399	$1,550,164

quo position. Therefore, this section proposes commercial/contract operation of the appropriated funds (including the Hospital) and MWR food services on a profit/loss basis with these facilities open to all base personnel and with AAFES food services remaining independent and in competition for the same customer. This concept implies, therefore, an expansion of the single manager total base concept to Dual Base Food Service Management and Operation.

The concept of having only two operators should provide a better overall level of food services than currently is the case by achieving some measure of integration of the appropriated fund and MWR operation in an otherwise competitive environment. For the reasons previously discussed regarding the inability of MWR and Appropriated Funds to expand to encompass operations outside their current responsibilities, the concept of dual operations will require a commercial firm to operate all MWR, Hospital, and Appropriated Fund food services on a profit/loss basis, while the Army – Air Force Exchange Service operates its own food services. This alternative would meet AAFES desires to retain its current operations and could still offer substantial cost savings through commercial P&L operation of all other base food services. It is expected that the competition generated under this system will become intense since two profit cost conscious operators will be trying to service the same customers. Moreover, AAFES may, in fact, lose some of its customers who are on SIK status because they will have meal card privileges in the profit-oriented, contractor-operated MWR and appropriated fund snack bars and cafeterias. Again, the key elements of the concept, as they were for the single manager concept are: (1) contract with large, experienced contractors, (2) utilize the P&L type contract with reimbursement of a percentage of gross sales to the government for access to the market, and (3) implement at selected bases rather than Air Force wide to preserve the training base.

The analysis of Dual Management and Operation of base food services indicates that even after excluding AAFES facilities, a commercial firm could operate all other base services and generate a large annual cost savings. (The Profit/Loss statement of each facility under Dual Management contractor operation may be found in Appendix I.) The three options considered under the single manager concept (Total Base Management) were also considered under Dual Management (see Table 4). The analysis of the various profit centers (Appropriated Fund, Hospital, and MWR) including sales and cost savings are identical to those presented under Total Base Management (refer to Appendix I for details). The assumption made by ARA, which made these projections, is that the AAFES does the same level of business while in competition with the commercial profit/loss operations. This may be erroneous since the commercial operations under this dual concept might be more competitive and generate larger sales at the expense of the AAFES operation. However, if one accepts this conservative assumption, the analysis of the cost savings of each option is similar to the analysis provided under Total Base Management. Some logic for this conservative assumption can be offered due to the fact that the new and renovated facilities have predominantly been associated with the appropriated fund and MWR operations. In a sense, therefore, the analysis under the single manager total base concept already considers to a great degree the distribution of patronage over the facilities proposed and already in existence. This assumption does fall down when it is assumed that SIK's can be permitted to eat at any contractor-operated appropriated fund or MWR facility using his meal card, since this should provide a highly competitive edge to the contractor for the SIK patron.

Table 4

Projected Savings of Dual Management and Operation of Base Food Services
(ARA Selected Reimbursement Rates)

	Option 1[a]	Option 2[b]	Option 3[b]
Appropriated Fund:			
Net Cost of Current Operations (Less BAS Reimbursement)	$3,691,507	3,691,507	3,691,507
Less Cost of Contractor Provided SIK Meals	2,608,159	2,608,159	2,876,347
Less Contract Administration Cost	55,000	55,000	55,000
Less Annualized A.F. Investment Cost	–	546,171	–
Plus Reimbursement to Air Force	47,111	235,552	204,963
Net Savings to Air Force	1,075,459	717,689	965,123
Hospital:			
Net Cost of Current Operations	1,530,937	1,530,937	1,530,937
Less Cost of Contractor Provided Patient Meals*	606,192	606,192	606,192
Plus Reimbursement to Air Force	39,972	39,972	39,972
Net Savings to Air Force	964,717	964,717	964,717
MWR:			
Net Current Loss of Current Operations**	(236,320)	(236,320)	(236,320)
Less Contract Administration Cost	21,000	21,000	21,000
Less Annualized A.F. Investment Cost	–	117,692	–
Plus Reimbursement to Air Force	73,380	142,338	77,733
Net Savings to Air Force	288,700	239,966	293,053
Total Annual Projected Air Force Savings	2,328,876	1,922,372	2,222,893
US Government Taxes on Corporate Profits***	49,339	232,833	182,024
Total Savings to the US Government	2,378,215	2,155,205	2,404,917

*This cost includes all patient meals and the costs recouped by cash meals, some patients (BAS, Officers, and Dependents) who are billed for subsistence.

**Based on ARA's analysis, which due to different accounting procedures, may differ from MWR's profit/loss statements.

***The US Government Taxes indicated are based on projected profits and corporate tax rates for 1978 from "The Tax Bite" by Irving L. Blackman in **Restaurant Business**, February 1, 1979.

[a]1% Reimbursement Rate

[b]5% Reimbursement Rate

Another set of assumptions made by ARA, as they did in the discussion under Total Base Food Service Management, is that SIK's would be permitted to eat for free only in the appropriated fund facilities, and that the SIK attendance rate would remain constant under each of the three options.

As was discussed at length in the previous section, the assumption that is proposed to rectify these latter ARA assumptions is to assume that a lower attendance rate holds for SIK's under option 3 with SIK's having meal card privileges at all base food service outlets and that the effects of increases in SIK attendance over the base line option 3 attendance rate be considered under options 1 and 2 to reflect the addition of the new and renovated facilities. The assumed attendance rate for option 3 in this instance is a 50% attendance rate which is 35% higher than the 37% attendance rate for SIK's (as determined by ARA) under the existing system at Travis AFB in second quarter FY 78 (this is in contrast to the 56% attendance rate assumed for the total base situation, which was 50% higher than the 37% attendance rate) and reflects the fact that the SIK individuals will now be able to eat using their meal cards not only in the appropriated fund facilities but also in the MWR facilities (in contrast to the situation under Total Base Management in which the SIK's had access not only to the appropriated fund and MWR facilities, but also to the AAFES facilities), as well as the effects of innovative, profit-oriented management on the part of the contractor. The results of this analysis, along with its impact on the data presented in Table 4, are presented after the basic discussion of the results summarized in Table 4.

As Table 4 indicates under ARA reimbursement rate assumptions, the third option, which creates no new facilities, generates the largest annual cost savings, $2,404,917. As has been pointed out previously, this rank for option 3 may be an artifact of using Travis AFB with its extensive relatively modern facilities as the test site. At bases with lesser facilities, the rank for option 3 might be lower, and satisfactory commercial contractors may not bid for access under **status quo** conditions. Moreover, option 3 does not provide the morale benefits of creating and renovating the facilities provided in options 1 and 2 to better meet the needs of the base population. Option 1, with contractor funding of new facilities, yields an annual cost savings of $2,378,215, only about 1% less than option 3. The smallest annual cost savings, $2,115,205 is generated under option 2, in which new facilities are created at the government's expense and with the possibly insurmountable headaches of MCA approval procedures. In fact, as pointed out previously, realistically option 2 is only truly feasible in situations where the renovations are so minor as to be possible without MCA funds. For bases requiring more elaborate construction and renovation, option 1 is the only option of the two which is valid unless the contract can be awarded for **status quo** (option 3) operation until MCA approval is received and construction is completed, whereupon the contract converts to option 2 type operation.

From the Air Force point of view (i.e., without considering income from taxes on corporate profits), however, the ranking is option 1 with $2,328,876 in annual savings, option 3 with $2,222,893 and option 2 with $1,922,372. This reversal in ranking between option 1 and option 3 results from the impact of the high amortization expense of the costs of renovation and construction on the contractor's profits.

Although not noted previously, the contractor's profits are lower under option 1 than under option 2 implying a contractor preference for the government financing of construction costs. It must be reiterated, however, that any implication from these figures regarding potential contractor preference for option 3 over option 1 may be applied only to bases with facilities comparable to Travis AFB.

Additionally, a further analysis was performed similar to that presented under Total Base Management to determine the sensitivity of total cost savings and contractor profits to increases in the reimbursement rate. The information presented in Table 5 details the results of this analysis. Once again, under option 1, an increase in the reimbursement rate from one to two percent results in the contractor undergoing losses which makes this higher reimbursement rate non-feasible. However, under options 2 and 3 the reimbursement rate can double (to 10%) and the contractor continues to generate a reasonable profit. At this reimbursement rate (10%) the total savings of option 2 increases 12% to $2,406,591 and the total savings of option 3 increases 8% to $2,599,034. If the reimbursement rate under options 2 and 3 are, therefore, increased to 10% and the rate remains at 1% for option 1, the final ranking of these three options changes once again. In this case, option 3 generates the largest cost savings $2,599,034 option 2 the second largest cost savings, $2,406,591 and option 1 the smallest cost savings, $2,378,215. The increased reimbursement rate clearly makes option 3 the preferred option from a cost standpoint. However, the difference in the cost savings between these three options is only 9.3%. Therefore, taking into consideration the fact that these numbers are projections rather than operating results, it becomes a matter of weighing the subjective benefits of and problems associated with each option, particularly the feasibility of option 2, in deciding which provides the most benefit for the Air Force or the government in general.

As previously referenced in this section and discussed under Total Base Management, ARA assumed that SIK personnel would only be allowed to eat for free in the appropriated fund facilities. However, the mechanism exists to allow SIK personnel to subsist for free by presenting their meal card in the other contractor operated facilities, and this would improve their morale and make the system more attractive from their viewpoint.

The proposal was made earlier in this section to consider an SIK attendance rate of 50% to be the option 3 **status quo** attendance rate with unlimited access for SIK's to all appropriated fund and MWR facilities (except closed membership clubs) and to analyze the sensitivity of the Table 4 cost savings to increases in SIK attendance under options 1 and 2. It will be noted that ARA had assumed the constant attendance rate of 56% under all three options to be the same under Dual Management as under Total Base Management. It was the feeling of NARADCOM personnel that a figure of 50% for the SIK attendance rate would be more logical in view of the fact that SIK personnel would no longer have the AAFES outlets available for their patronage.

Again, in order to perform this sensitivity analysis NARADCOM personnel selected SIK attendance increases under options 1 and 2 of 10%, 20% and 30% above the baseline SIK attendance rate of 50%. The span of attendance rates so provided for options 1 and 2 will, therefore, range from 55% to 65%. In view of previous observations that an approximately 75% attendance rate at all dining facilities on the base is probably as much as can be expected,

Table 5

Total Projected Savings of Dual Base Management With Different Reimbursement Rates

	ARA Selected Reimbursement Rate	Increased Reimbursement Rate 100% Increase	Increased Reimbursement Rate 200% Increase
Option 1			
Reimbursement Rate	1%	2%*	–
Net Annual Projected Air Force Savings at 1%	$2,328,276	$2,328,876	–
Plus Increased Reimbursement Over 1%	0	160,463	–
Corporate Profits (loss) at Assumed Reimbursement Rate	123,842	(36,621)	–
Plus Corporate Taxes (tax loss) at Assumed Reimbursement Rate	49,339	(17,578)	–
Total Savings to the U.S. Government at the Assumed Reimbursement Rate	2,378,215	2,471,761	–
Option 2			
Reimbursement Rate	5%	10%	15%*
Net Annual Projected Air Force Savings at 5%	1,922,372	1,922,372	1,922,372
Plus Increased Reimbursement Over 5%	0	417,862	835,724
Corporate Profits (loss) at Assumed Reimbursement Rate	584,421	166,559	(251,303)
Plus Corporate Taxes (tax loss) at Assumed Reimbursement Rate	232,833	66,357	(120,625)
Total Savings to the U.S. Government at the Assumed Reimbursement Rate	2,155,205	2,406,591	2,637,471
Option 3			
Reimbursement Rate	5%	10%	15%*
Net Annual Projected Air Force Savings at 5%	2,222,893	2,222,893	2,222,893
Plus Increased Reimbursement Over 5%	0	322,668	645,336
Corporate Profits (loss) at Assumed Reimbursement Rate	456,888	134,220	(188,448)
Plus Corporate Taxes (tax loss) at Assumed Reimbursement Rate	182,024	53,473	(90,455)
Total Savings to the U.S. Government at the Assumed Reimbursement Rate	2,404,917	2,599,034	2,777,774

*After initial indications of corporate loss higher reimbursements are not feasible.

and in view of the fact that some of this attendance will be at AAFES facilities, the 65% attendance rate does seem to be the outer limit of expected SIK attendance rates. Please refer to the Total Base Management section for the details and assumptions required in carrying out the analysis.

The results of this analysis with respect to the total cost savings of each option under Dual Base Management is presented in Table 6. As shown, as SIK attendance increases, the total cost for SIK meals also increases, but at a lesser rate. This is based on ARA's assumption that the total cost per meal decreases as the total volume increases. (Refer to the section on Total Base Management for details.) This analysis reveals that even a dramatic increase of 30% in SIK attendance (to an attendance rate of 65%) only reduces the total costs savings of option 1 by 18% to $1,936,445. Moreover, even with a dramatic increase in SIK attendance this option continues to be cost effective with respect to current conventional operations. Finally, one should note that increases in the SIK attendance rate do not change the relative ranking of the three options in terms of their total cost savings, even though the cost savings level is reduced. Therefore, it becomes a matter of weighing the subjective benefits of and problems associated with each option, not merely determining which generates the greatest cost savings, in deciding which provides the most benefit to the Air Force or the government in general.

Having completed the analysis of profit/loss contractor operations under Dual Base Management, there may be some question as to whether the standard type of Air Force contract currently in use could have generated the same level of savings. At this point in the report, we are able to present a comparison of the standard Air Force food service contract (a management fee type contract) versus the profit/loss type contract recommended here as ARA Food Services in conducting their analysis for NARADCOM had prepared appropriate estimates of the magnitude of the savings involved in utilizing a standard food service contract with a commercial firm to manage and operate the current Air Force operated appropriated fund, hospital and MWR food service facilities at Travis AFB. The information presented in Table 7 details the projected savings of this standard management fee contract at the Travis site. In this analysis, ARA assumed that the government would fund the new facility construction and renovation implying that this analysis corresponds most closely to option 2. The total savings of the standard contract is $1,884,988 (see Table 7) which is about $270,000 per year less than Dual Base Profit/Loss Contractor Management contract under option 2, which generates savings of $2,155,205. It should be noted that option 2 generates the lowest level of cost savings of the three options under Dual Base Management and, therefore, if either option 1 or 3 were selected for comparison, the cost difference is even greater, $493,000 with respect to option 1, and $520,000 with respect to option 3. Further, if the reimbursement rate were to increase, which, as previously discussed, it could under options 2 or 3 from 5% to 10%, the cost savings would become even greater in favor of the P/L type contract. The profit/loss type of contracting is, therefore, definitely preferred over the standard management fee type contract.

It will be noted that Dual Base Management generates larger cost savings than Single Manager Total Base Management. This is because under Total Base Management, ARA has projected that the contractor operation of AAFES facilities will generate less profit than AAFES operation of its own facilities. This does not imply that the contractor is a less efficient

Table 6

Projected Savings of Dual Base Management with Increased SIK Attendance Rates

		Option 3	
1.	Profit/Loss Operation of the Status Quo System (Attendance Rate = 50%)		
	A. SIK Reimbursement Cost	2,698,329	
	B. Total Savings	2,404,917	
2.	10% Increase in SIK Attendance (55%)		
		Option 1	**Option 2**
	A. Savings at the 50% Attendance Rate Level	2,378,215	2,155,205
	B. SIK Meal Cost Increase	153,300	153,300
	C. Increased Air Force Reimbursement	1,533	7,665
	D. Increase in Taxes on Corporate Profits	3,664	3,664
	E. Total Additional Cost	148,103	141,971
	F. Total Savings	2,230,112	2,013,234
3.	20% Increase in SIK Attendance (60%)		
	A. Savings at the 50% Attendance Rate Level	2,378,215	2,155,205
	B. SIK Meal Cost increase	304,848	304,848
	C. Increased Air Force Reimbursement	3,048	15,242
	D. Increase in Taxes on Corporate Profits	7,286	7,286
	E. Total Additional Cost	2,083,701	1,872,885
4.	30% Increase in SIK Attendance (65%)		
	A. Savings at the 50% Attendance Rate Level	2,378,215	2,155,205
	B. SIK Meal Cost Increase	457,272	457,272
	C. Increased Air Force Reimbursement	4,573	22,864
	D. Increase in Taxes on Corporate Profits	10,929	10,929
	E. Total Additional Costs	441,770	423,479
	F. Total Savings	1,936,445	1,731,721

Table 7

Management Fee Contract – Dual Base Food Services
(Govt. Funds New Facility Construction & Renovation)

	Option 2
Appropriated Fund:	
Net Cost of Current Operations	(3,691,507)
Less Cost of Contractor Managed Operations	(3,079,325)
Net Savings to the Air Force	612,182
Hospital (& Child Care Center):	
Net Cost of Current Operations	(1,530,937)
Less Cost of Contractor Managed Operations	(855,412)
Net Savings to the Air Force	675,525
MWR:	
Net Loss of Current Operations	(232,123)*
Net Profit to MWR of Contractor Managed Operations	188,629
Net Savings to the Air Force	420,752
Total Annual Projected Air Force Savings	$1,708,459
U.S. Government Taxes on Corporate Profits	176,529
Total Savings to the U.S. Government	$1,884,988

*Based on ARA's analysis, which due to different accounting procedures, may differ from MWR's profit/loss statement.

operator than AAFES, but simply that AAFES is efficient enough so that the contractor's profit requirement more than offsets any operating improvements he can institute in the AAFES operation. Therefore, the elimination of contractor operation of AAFES facilities will project an increased cost savings to the government, but only if it is assumed that the contractor takes no business from AAFES. As previously noted, if the contractor is very aggressive and successfully challenges AAFES for the customers, the total cost savings to government operations picture will change in favor of the single manager concept.

Nevertheless, given the assumption previously noted, as reported herein, Dual Base Management is more cost advantageous than Total Base Management. Further, Dual Base Management allows AAFES to remain in a **status quo** position, which they desire at the present time. Finally, under options 1 and 2 of this Dual manager concept, new facilities are also assumed to better service the base population's needs, thereby increasing morale, even though implementation of this intent under option 2 might be impossible **vis a vis** MCA budget approval.

III. Cooperative Management System

The reluctance to relinquish control to another operator appears to be an obstacle to having any single organization operate and manage base food services other than its own. That is, all four organizations that currently offer food services appear to want **status quo** and to retain direct control of their food service operations. This is not unexpected since the personnel expressing these type opinions are the personnel most concerned about, retaining their jobs if such a change to any level of central management and operation was implemented. This latter comment is not to be construed as implying that perfectly valid obstacles to more central management may not arise, e.g., statutory problems regarding the co-mingling of appropriated and non-appropriated funds, or Army objections to suggestions related to AAFES operations, etc.

If this reluctance to relinquish management and operational control or any other obstacles cannot be overcome, there is still an option to the current system which can be considered. This option has been designated the cooperative management system. This concept involves the formation of a Board of Governors that meets to determine the base wide food service needs and how they can most efficiently and economically be met. This alternative is probably the easiest to implement in that it requires the fewest major changes. This concept allows the various organizations to retain direct control of their food services. The appropriated funds and any of the other organizations may operate their facilities with their own personnel, contract for labor, or have a commercial firm run their food services on a profit/loss basis.

The Board of Governors (BOG) would consist of a chairman who should be either the Deputy Base Commander or the Chief of Services. The other members of the board would include the food service officer, MWR Chief, base AAFES manager, and a dietitian to represent the hospital. Several other personnel should be selected including officers and enlisted personnel to represent and inform base personnel and provide input regarding customer desires. The BOG should make a point of publicizing its recommendations and changes in the base newspaper. The Board should meet at least twice a month. A complete report should be made to the Base Commander on all meeting results. The Chairman of the Board would serve as the Base Commander's food service coordinator and policy advisor.

The Board would be informed of all new mission requirements to be certain that the food service needs of base personnel are met, and the members would discuss how new trends in consumer demands (e.g., preferences for fast food) would be serviced. The purpose of the Board will be to insure that the base consumer needs, whether they are brought about by mission requirements or by consumer preferences, are met while reducing food service losses by eliminating losing meals and operations. The Board would have the power to recommend the closure of facilities, the elimination of meals, or the reduction of operating hours that are unprofitable or too costly. Implementation of such recommendations would follow approval by the Base Commander of the Board Chairman's request. The Board would also recommend to the Base Commander appropriate services (less costly, or more desired by consumers), to replace those being eliminated or to expand the available services. This will give food services direct access to the Base Commander so that immediate changes may be effected.

The base mission requirements would have to be met and this might, naturally, require some unprofitable meals or hours of operation to remain. However, the Board would insure that each organization shares equally in bearing the burden of these losing, but necessary operations. Where possible, any unnecessary duplication of effort would cease. For example, at the Travis site there was an appropriated fund dining hall and a complete AAFES cafeteria within easy walking distance of one another. One facility, with some changes in staffing, could handle the demand during many time periods (i.e., weekends). This type of unnecessary competition reduces the volume and, therefore, the profits on non-appropriated fund operations. It also increases the costs of appropriated fund operations since they could close, thus saving money, if airmen could eat in the non-appropriated fund facility with the facility being reimbursed by the government for meals eaten by personnel who subsist on SIK. It should be noted that the MWR organization, for example, responded very favorably toward providing food services for SIK personnel during weekend and holiday periods.

The Board would have one organization perform a survey, (a different organization would perform the survey each year) of the consumer population on an Air Force base (enlisted, officer, civilians, military dependents, and retirees) to determine the market trends. This would be done in order to effect changes in base food services to meet any new market needs. If appropriate, new facilities, meals or services would be implemented to meet these needs. A suggestion program would also always be in effect to supplement the input of the regular enlisted, officer, and civilian representatives on the Board.

The Board will recommend changes in menus, operating hours, pricing strategies, and marketing techniques aimed at increasing participation in base food services. In this manner, the Board will permit a sharing of ideas, the implementation of new types of food service operations, the reduction of losing operations, and the generation of valuable information on the market the Air Force is trying to serve.

IV. Readjustment of Air Force Appropriated Fund Food Services

This section deals with alternatives that involve only appropriated fund food services in the event that the three other organizations that offer food services on Air Force bases prefer to remain completely autonomous. This situation is a conceivable possibility since both MWR and AAFES may desire to remain in a **status quo** position either maintaining only their profitable

food service operations or retaining marginal food service operations with the hope of becoming profitable.

A set of options has been developed involving the commercial operator profit/loss contracting method previously proposed, but covering only the appropriated fund food services. In order for this concept to be feasible and attractive to qualified contractors, the appropriated fund facilities must be open to everyone even though enlisted personnel who subsist on SIK will eat for free in these facilities, and the contractor would be reimbursed by the government for the SIK meals. The previously referenced requirements for success of profit/loss contracts, namely, experienced capable contractors and implementation at selected bases rather than Air Force wide, continue to hold true as well.

A second set of alternatives are also presented which involve reorganization of appropriated fund operations while retaining military personnel for management and labor functions. These alternatives involve changes in pricing strategies such as implementing an a la carte operation and changes which involve reducing the hours of operation while allowing SIK enlisted personnel to subsist in other base facilities. The latter alternative, entitled **SIK Reimbursement**, will provide for payment by the government for meals consumed by SIK personnel in designated facilities operated by MWR or AAFES.

A. Profit/Loss Contracting

At designated bases a commercial firm could manage and operate all appropriated fund food services under the previously described P&L type of contract and generate a considerable cost savings for the government. This alternative is identical to the contracting proposal presented in the section on Single Manager, Total Base Management except that in this case the contractor will operate the appropriated fund operations only. The details of how profit/loss contracting will operate were presented in Section I, as have the necessary conditions for its success. (See Appendix J for a complete discussion and the P/L projections for each facility).

Three options for the appropriated fund operation (including the flight line operation) identical to those identified in the section on Single Manager, Total Base Management were considered. Options 1 and 2 create a new food service outlet (a Pizza/Mexican fast food convenience type restaurant) and extensively renovate the existing dining facilities to better meet the needs of the base population, while Option 3 retains the current system with no new construction or renovation.

As shown in Table 8, using ARA assumed contractor reimbursement rates Option 3, which does not renovate or create any new facilities, generates the highest annual cost savings, $1,062,710, but this may be an artifact of the extensive, relatively modern facilities at Travis AFB. Option 1, in which the construction of new facilities is funded by the commercial firm, generates lower savings of $1,027,933 to the government than Option 3, but also yields a loss to the contractor implying that it is not a truly feasible option. One comment might be made here about this particular ARA projection being motivated by contractor preference for Option 2 over Option 1. That is, if ARA had cut the scope of the dining facility renovations in half, for example, they could have projected a profit to the contractor, and increased cost savings to the government, under option 1 of close to $200,000, rather than a loss, and upgraded

the cost savings to the government under option 2 a commensurate amount as well. Option 2 generates the lowest annual cost savings of $841,499 since it requires a larger financial responsibility in the form of capital investment on the part of the Air Force.

Again, as in previous sections, an analysis of the sensitivity of total cost savings and contractor profits to changes in the reimbursement rate was conducted and is presented in Table 9. As shown, even at the current low reimbursement rate of 1%, option 1 is not feasible since at 1% the contractor suffers losses. Admittedly, this may be due to the large renovation cost ARA projected for each dining hall. As discussed previously, if ARA had cut these renovation costs in half, this option would have become feasible; i.e., the contractor would be able to generate a profit. If the reimbursement rate under options 2 and 3 is doubled to 10%, the contractor continues to generate a profit and the total cost savings increases by 11.6% under option 3 to $1,185,773, and by 16,8% to $983,207 under option 2. However, the projected corporate profits at this reimbursement rate may not be high enough to attract the high quality contractor necessary for successful profit/loss operation.

It should be noted that in conducting this analysis, ARA had again assumed a 56% SIK attendance rate under all three options. In view of the fact that NARADCOM has assumed in previous sections that a 56% attendance rate would be appropriate under status quo conditions with unlimited access to **all** base facilities under Total Base P/L Management (a 50% increase over the existing 37% SIK attendance rate determined by ARA for Travis during the second quarter of FY 78) then a 25% increase in SIK attendance rate (from the existing 37%) to reflect innovative, profit oriented contractor management to a level of 46% under option 3, **status quo**, would be more appropriate for just appropriated fund facilities. A sensitivity analysis could then be performed to ascertain the effects of SIK attendance rate increases resulting from the new and renovated facilities under options 1 and 2. As in our previous analyses in other sections, one again finds in Table 10 that option 3, the **status quo**, yields the highest level of cost savings since the SIK attendance rate, and the associated government reimbursement is lowest under this option. However, one also finds that the cost for additional SIK attendance increases at a lesser rate than the attendance rate itself increases, implying that improvements in morale benefits are achieved at less than proportional cost increases. Finally, it will be noted in Table 10 that option 1 is always preferred over option 2, a fortuitous occurrence particularly in view of statements regarding the non-feasibility of actually being able to implement option 2.

With regard to any question as to whether a standard appropriated fund food service contract could generate the same savings as the Profit/Loss type contract, the ARA Food Services Co., while under contract to NARADCOM, prepared an analysis of Contractor Managed Appropriated Fund Food Services assuming a standard management fee type of contract. The results of this analysis are presented in Table 11 and they indicate that the standard contractual arrangement does not generate the cost savings that the profit/loss type arrangement provides. For example, the total savings to the government of management fee contracted appropriated fund food services is $703,362, while the equivalent arrangement under the P/L contracting option 2, (where the government provides the funding for new facility construction and renovation which most closely approximates the situation under the standard management fee contract) generates an additional $138,000 per year in cost savings. Once again, if a different

Table 8

Projected Savings of Profit/Loss Operations of Appropriated Fund Facilities
(ARA Selected Reimbursement Rates)

Appropriated Funds:	Option 1[a]	Option 2[b]	Option 3[b]
Net Cost of Current Operations	3,691,507	3,691,507	3,691,507
Less Cost of Contractor Provided SIK Meals	2,608,159	2,608,159	2,876,347
Less Contractor Administration Cost	55,000	55,000	55,000
Plus Reimbursement to the Air Force	–	546,171	–
Reimbursement to the Air Force	47,111*	235,552*	204,560
Net Savings to the Air Force	1,075,459	717,129	964,720
U.S. Government Taxes on Corporate Profits**	(47,526)	123,770	97,990
Total Savings to the U.S. Government	1,027,933	841,499	1,062,710

*This figure includes the projected return to the Government of the Proposed Free Standing Fast Food Operation, Pasquale's Tamale.

The U.S. Government taxes indicated are based on projected profits and corporate tax rates for 1978 from "The Tax Bite" by Irving L. Blackman in **Restaurant Business, February 1, 1979.

[a]1% Reimbursement Rate

[b]5% Reimbursement Rate

Table 9

Total Projected Savings of Appropriated Fund P/L Operations
With Different Reimbursement Rates

	ARA Selected Reimbursement Rate	Increased Reimbursement Rate 100% Increase	Increased Reimbursement Rate 200% Increase
Option 1			
Reimbursement Rate	1%*	–	–
Net Annual Projected Air Force Savings at 1%	$1,075,459	–	–
Plus Increased Reimbursement Over 1%	0	–	–
Corporate Profits (loss) At Assumed Reimbursement Rate	(99,012)	–	–
Plus Corporate Taxes (tax loss) on Profits or Losses at the Assumed Reimbursement Rate	(47,526)	–	–
Total Savings to the U.S. Government at the Assumed Reimbursement Rate	1,027,933	–	–
Option 2			
Reimbursement Rate	5%	10%	15%*
Net Annual Projected Air Force Savings at 5%	717,729	717,729	117,729
Plus Increased Reimbursement Over 1%	0	235,552	471,104
Corporate Profits (loss) at Assumed Reimbursement Rate	310,667	75,115	(160,437)
Plus Corporate Taxes (tax loss) on Profits or Losses at the Assumed Reimbursement Rate	123,770	29,926	(77,010)
Total Savings to the U.S. Government at the Assumed Reimbursement Rate	841,499	983,207	
Option 3			
Reimbursement Rate	5%	10%	15%*
Net Annual Projected Air Force Savings at 5%	964,720		
Plus Increased Reimbursement Over 5%	0	204,560	409,120
Corporate Profits (loss) at Assumed Reimbursement Rate	245,958	41,398	163,162
Plus Corporate Taxes (tax loss) on Profits or Losses at the Assumed Reimbursement Rate	97,990	16,493	(78,318)
Total Savings to the U.S. Government at the Assumed Reimbursement Rate	1,062,710	1,185,773	1,295,522

*After initial indications of corporate loss, higher reimbursements are not feasible.

Table 10

Projected Savings of P/L Appropriated Fund Operations With Increased SIK Attendance Rates

	Option 3
1. Profit/Loss Operation of the Status Quo System (Attendance Rate = 46%)	
A. SIK Reimbursement Cost	$2,572,535
B. Total Savings	1,062,710

	Option 1	Option 2
2. 10% Increase in SIK Attendance (50.6%)		
A. Savings at the 46% Attendance Rate Level	$1,027,933	841,499
B. SIK Meal Cost Increase	145,871	145,871
C. Increased Air Force Reimbursement	1,459	7,294
D. Increase in Taxes on Corporate Profits	3,486	3,486
E. Total Additional Cost	140,926	135,091
F. Total Savings	887,007	706,408
3. 20% Increase in SIK Attendance (55.2%)		
A. Savings at the 46% Attendance Rate Level	1,027,933	841,499
B. SIK Meal Cost Increase	290,131	290,131
C. Increased Air Force Reimbursement	2,901	14,507
D. Increase in Taxes on Corporate Profits	6,934	6,934
E. Total Additional Cost	280,296	268,690
F. Total Savings	747,637	572,809
4. 30% Increase in SIK Attendance (59.8%)		
A. Savings at the 56% Attendance Rate Level	1,027,933	841,499
B. SIK Meal Cost Increase	435,196	435,196
C. Increased Air Force Reimbursement	4,352	21,760
D. Increase in Taxes on Corporate Profits	10,401	10,401
E. Total Additional Costs	420,443	403,035
F. Total Savings	607,490	438,464

Table 11

Management Fee Type Contract for Appropriated Fund Food Services (Govt. Funds New Facility Construction & Renovation)

	Option 2
Appropriated Fund:	
Net Cost of Current Operations	$(3,691,507)
Less Cost of Contractor Managed Operations	(3,079,325)
Net Savings to the Air Force	612,182
U.S. Government Taxes on Corporate Profits	91,180
Total Savings to the U.S. Government	703,362

option is selected under P/L contracting, the cost savings are much greater, that is, the increased cost savings are about $325,000 per year more under option 1, and about $360,000 per year more under option 3. Also, if the reimbursement rates are increased, under options 1 and 2, the P/L contracting method becomes even more cost effective. Therefore, in the final analysis, the profit/loss contracting scenario is definitely the preferred type of contracting.

One must carefully weigh the subjective benefits in deciding which option is best for the Air Force particularly in view of comments relating to the realism of projections for option 1, the problems of securing MCA funding under option 2, the fact that projections for option 3 will hold only for Travis-like bases with existing modern facilities, and the fact that option 3 does not provide the morale benefits of meeting the broader range of base food service requirements that options 1 and 2 do. The one incontrovertible statement that can be made, however, is that some form of P/L contractor operation will yield significant cost savings over either current military operation or conventional management fee contracts. It must be reiterated that while very large cost savings result from this contracting alternative, it does require that the Air Force adopt this new form of contracting and not the standard contract, that they limit bidding to firms with demonstrated competence, that they open the dining halls to the entire base, and that they implement this concept at selected bases rather than Air Force-wide to maintain the training base.

B. AAFES Operation of Appropriated Fund Facilities

The alternative of AAFES operation of appropriated fund facilities provides for the subsistence of enlisted personnel in designated base facilities operated by the Army-Air Force Exchange Service (AAFES) while reducing the resources required for appropriated fund operations. As stated previously in ARA's estimation and if Travis AFB is a typical operation, the Army-Air Force Exchange Service has a well run food service program and appears capable of expanding its food service responsibilities on Air Force bases. Unfortunately, as has been previously noted, AAFES declined to perform a feasibility study to determine the potential cost/benefits of expanding the current scope of their food service program.

NARADCOM personnel hesitated to perform an analysis of any large scale AAFES expansion of activity comparable in scope to Total or Dual Base Management because that would have required many assumptions about AAFES ability to successfully operate hospital food services and the full range of club services. However, an analysis of AAFES operation of appropriated fund enlisted dining facilities requires only a minimum number of assumptions. Therefore, it was felt that a valid projection could be made for this specific limited situation.

The following analysis is similar to the analysis of commercial profit/loss operation of the appropriated fund system except that now AAFES takes the role of the commercial operator and runs the enlisted dining halls on a profit/loss basis as they do their own food services. The hospital and MWR food services will remain as independent entities and, therefore, are not included.

The AAFES operation of the appropriated fund facilities envisioned provides for the subsistence of enlisted personnel in all AAFES food service operations, including, in particular, meal card privileges for enlisted personnel on SIK. The AAFES food service operations represent

acceptable facilities as they offer food services which vary from small snack bars to complete cafeteria style operations, and they have food outlets located in all areas of a base. Admittedly, at some smaller bases, AAFES does not operate full scale cafeterias. However, AAFES would be allowed to take over, just as a commercial contractor would under any of the profit/loss scenarios, the appropriated fund enlisted dining halls and run them as unlimited access cafeterias. Since AAFES may operate any and all of the regular appropriated fund dining halls as profit/loss cafeterias, they should be able to handle the increased volume of SIK personnel in particular.

All the AAFES operated cafeterias would, therefore, be open to all personnel in the same manner as presented in the profit/loss scenario. All personnel, except SIK personnel, would pay the posted prices just as they would in the existing AAFES food facilities. The enlisted personnel who subsist on SIK will eat for free in these facilities and AAFES will, in turn, be reimbursed by the Air Force for these meals. The reimbursement for each meal will include the cost of food, labor, utilities, and the level of direct operating profit AAFES strives for in each region. The actual procedure for reimbursing the AAFES for the SIK meals consumed in their food outlets will be identical to that proposed under the contractor P/L scenario.

It should be noted that even this system should only be implemented at selected bases since the Air Force will have to maintain operating responsibility for sufficient numbers of appropriated fund operations to serve as a training base for military contingency feeding requirements.

As the current appropriated fund facilities would be run by AAFES as profit/loss cafeterias, sizable financial savings to the appropriated fund system will be generated. The cost savings to be expected for this alternative form of operation of the dining halls are presented in Table 12 and represents the equivalent of option 3, **status quo**, operation. That is, no renovation or new construction is assumed. AAFES simply assumes operating responsibility. The cost savings itemized for food, labor, utilities, maintenance, and the mess attendant contract costs partially offset by the revenues generated by BAS customers in this Table represent the costs currently borne by the appropriated fund operation at Travis AFB which would decrease when AAFES assumes the responsibility for feeding the enlisted troops (see appendix K for details). In place of these costs, the Air Force will pay for the subsistence of SIK personnel in the AAFES facilities and this total cost is $2,782,959. Two assumptions were made in developing this cost (see appendix K for details). First, the operating profit utilized in developing the reimbursement rate per meal for SIK's was established using the AAFES average direct operating profit in the Golden Gate region of 6.74% rather than the ARA projected profit goal of 6%. All other elements of the SIK reimbursement rate were considered to be equal to the ARA figures. Second, the SIK attendance rate was assumed to increase 40% from the existing 37% at Travis AFB to a new level of 52% to reflect the fact that the SIK patron would now have all the AAFES food operations at his disposal for free dining, as well as the profit/volume oriented, well controlled operation of the AAFES. Note this is six percentage points higher than the 46% attendance rate assumed for option 3 commercial operation of appropriated fund facilities to reflect the other AAFES facilities available to the SIK patron under this alternative. The 52% SIK attendance rate is, however, comparable to 50% SIK attendance rate assumed for commercial operation of appropriated fund and MWR food service facilities in the Dual Base Management section. The added two percentage points reflecting the fact that there are more AAFES than MWR facilities to attract the SIK customer.

Table 12

NARADCOM Cost Analysis of AAFES Operation of Appropriated Fund Food Services

1.	Annual Savings from Suspension of Direct Military Operation of Appropriated Fund Food Facilities at Travis AFB with 37% SIK Attendance.		
	A. Food		$1,517,092
	B. Labor		
	– Military and Civilian Labor	$1,373,467	
	– Mess Attendant Contract	1,187,928	
			2,561,395
	C. Direct		213,608
	D. Subtotal		4,292,095
	E. BAS Offsetting Revenues		600,588
	F. Total Net Savings		3,691,507
2.	Annual SIK Reimbursement Costs		
	A. Food		874,598
	B. Labor		1,221,761
	C. Direct and Other		499,029
	D. Profit		187,571
	E. Total		2,782,959
3.	Appropriated Fund Administration Cost		55,000
4.	Overall Annual Net Savings to the Air Force		853,548
5.	AAFES Increased Profits		187,571
	A. Overhead	127,459	
	B. Contributions to the Welfare Fund	60,112	
6.	Total Annual Savings to the Military		$ 665,977

It may be noted that even though AAFES provision of meals for enlisted personnel assumes a 40% increase in SIK attendance (from 37% to 52%) an annual net savings of $853,548 is projected over current appropriated fund dining hall operating costs. An additional benefit is created by this system in that the additional sales volume from enlisted personnel formally eating in the dining hall will also generate more AAFES profits. This full amount of this profit ($187,571) is considered a benefit to the military (Air Force and Army). Actually, based on the average regional and headquarters overhead rates, $127,459 would ordinarily be required for AAFES regional and headquarters overhead. The remaining $60,112 would be given to the military welfare fund. However, we have assumed that AAFES takeover of the appropriated fund facilities will not require any additional regional and headquarters overhead. Therefore, even if the $127,459 was used for overhead, this would lower by $127,459 the amount required for overhead from the other AAFES Golden Gate region food facilities. Therefore, we have assumed the entire amount of direct operating profit as a benefit to the military. The total savings of this alternative, therefore, including direct savings from AAFES provision of all enlisted meals and additional profits to AAFES is $665,977.

Any extrapolation of this **status quo** type AAFES operation to situations involving renovation and new construction can only validly be prepared by AAFES as ARA has done for the commercial contractor situation. As AAFES was not prepared to do such an analyses, no such projections are presented here.

C. SIK Reimbursement

The SIK (Subsistence-In-Kind) Reimbursement System provides for the subsistence of enlisted personnel in designated base facilities operated by the Army-Air Force Exchange Service or Morale, Welfare and Recreation Division while reducing the resources required for appropriated fund operations. The SIK Reimbursement System involves minimum modification to current operations and has been analyzed and shown to produce significant cost savings when compared to the present system. The savings result from the closure of the appropriated fund food facilities (excluding SAC alert, inflight and crash kitchens) on weekends and certain holidays when attendance rates are normally very low.

The MWR and AAFES food service operations represent acceptable designated facilities as they offer food services which vary from small snack bars to complete cafeteria or restaurant operations, and they have food outlets located in all areas of a base.

Since most bases provide several appropriated fund dining facilities several alternative base food outlets should be designated to provide the necessary convenience of location as well as to handle the variations in demands for different types of food service and different operating hours. With respect to this latter point, at least one of the designated facilities should offer a midnight meal if the mission requires it. Finally, the designated facilities must offer acceptable menus with variety and quantity of items similar to that available in the regular appropriated fund dining halls. The overall objective is to provide the same level of food service under SIK Reimbursement as offered under the current system.

The designated facilities will provide for and supply the total management services, food, labor, utilities, and facility and equipment repairs incurred by the meals served, for which

the appropriated fund system will reimburse them for specific SIK personnel utilization during designated operating hours on a meal-by-meal basis. Records of the number of SIK customers and what they consumed will be collected at the designated facility's cash register in a manner similar to that indicated for P/L contractor operation. That is, these SIK customers will identify themselves at the cash register at the time their purchases are rung up and the identification number along with what they selected, the date, the meal and facility identification will be recorded. These cash register records will then be used by the appropriated fund for weekly or monthly reimbursement to the facility or organization responsible for the facilities operation. The SIK personnel would be allowed to take as much food as they like, up to a certain established maximum, and if more food is taken the extra cost would be paid by the SIK individual. The meal allowance limit would be negotiated for a set time period, as was discussed for P&L contract operations, by using the official Basic Daily Food Allowance for the particular meal as the food cost and adding to it a labor and overhead cost increment and profit. The designated facility would be reimbursed for the exact items taken by the SIK customer. Again there is a potential savings to the Air Force that would result from using this type of an a la carte reimbursement system. That is, a charge which is less than the maximum reimbursement rate represents a savings to the Air Force, since the difference between actual charges as billed to appropriated fund and the maximum reimbursement rate would be an outlay avoided.

Implementation of the SIK Reimbursement System requires closure of the appropriated fund food facilities during weekend and certain holiday periods in order to be cost effective. The closure of the appropriated fund facilities during these times will generate significant cost savings in personnel, food, utilities, and maintenance. The details of the savings that result from closure of the appropriated fund facilities based on CY 76 data from Travis AFB are shown in Table 13. As indicated the overall net annual savings generated by SIK Reimbursement on weekends and holidays is $419,320. If the meal attendance rates for SIK personnel increased under this plan, the corresponding annual savings would be decremented, but associated improvements in nutritional intake and morale should result.

Naturally the attendance levels in the other base food facilities would change after implementation of the SIK Reimbursement System. Specifically, BAS personnel who would have eaten in the appropriated fund facilities had they been open will probably eat in the AAFES and MWR facilities which should increase their volume and, hopefully, their profits. It also seems reasonable to assume that these operations will increase the quality and diversity of their offerings to attract this new business with a consequent gain to the consumer.

D. Conventional versus A La Carte Operations and Hybrids

This section is presented for the sake of completeness in order to delineate all potential feasible alternatives to the current Air Force food service system. The a la carte concept is currently being tested by the Air Force at several Air Force bases. This section will indicate the advantages and disadvantages of the a la carte concept when implemented under two options, one involves placing all enlisted personnel on BAS, BAS/A La Carte, and a second option, entitled Modified A La Carte, implements the a la carte concept while retaining enlisted personnel on their current BAS or SIK status.

Table 13

Cost Analysis of SIK Reimbursement for Weekend and Holiday Periods (Based on Travis AFB CY 1976 Information)

1.	Savings generated from closure of the regular appropriated fund food facilities.	
	A. Annual savings of food costs of weighted rations	$ 438,056
	B. Annual savings due to fewer personnel spaces required (includes positions held by military and civilian personnel)	$ 223,955
	C. Annual savings in utility costs	$ 34,845
	D. Annual savings in maintenance costs	$ 31,356
	E. Annual reduction in mess attendant contract costs	$ 378,041
	Total annual cost reductions	$1,106,253
2.	Total annual SIK Reimbursement cost = (SIK weighted rations)X(Total Daily Reimbursement)*	$ 686,933
3.	Overall annual net savings	$ 419,320

*It is assumed that BDFA = $2.65. The ration of raw food cost to total item cost is assumed to be $0.45. Therefore, Total Daily Reimbursement = $2.65/0.45 = $5.90, to be distributed by meal at $1.18 for breakfast, $2.26 each for lunch and dinner.

The conventional appropriated fund food service system requires enlisted personnel who subsist on BAS to pay for meals consumed in appropriated fund facilities on a flat meal rate based on a percentage of the BAS (Basic Allowance for Subsistence) rate. The a la carte concept involves payment by enlisted personnel who subsist on BAS on an item by item basis for food consumed in appropriated fund facilities. It is expected that the a la carte meal pricing system will generate an increase in volume of BAS customers who only desire one or two food items, which should cost less than the BAS rate for that meal but are unwilling to pay the full meal cost as is currently required. Also, the a la carte system involves more progressive cookery and tighter cost and inventory controls due to the fact that issue costs must balance against earned income. These tighter cost and inventory controls will be a direct benefit of the new system.

A cost analysis of implementation of an all BAS/A La Carte system at Travis AFB has been performed to indicate its implications in comparison to the other alternatives under investigation. The analysis used assumptions derived from a NARADCOM test of an all BAS/A La Carte operation at NAS Alameda from March 1976 through August 1976.

The test at NAS Alameda revealed that a number of factors significantly contributed to a change in the costs (see appendix L for details). First, as the head count changed, the revenues collected changed. For example, if a BAS/A La Carte system was instituted at Travis AFB, there would be a commensurate annual decrease of $341,758 in revenues collected. This is primarily due to an expected decrease in the attendance rate of SIK personnel converted to BAS status only partially offset by an increase in BAS attendance. Based on that analysis of the NAS Alameda, all BAS/A La Carte system, the projected reduction in headcount that would result from a BAS/A La Carte system instituted at Travis AFB is 129,429 weighted rations per year. Second, the average cost of meals taken in an a la carte environment is less than the BDFA and, therefore, the food cost on a per meal basis is less costly. Third, the a la carte system requires cashiers for each serving line in a dining facility and this cost ($153,356) has to be included. The figure used in this analysis is based on hiring part time civilian cashiers (military personnel are not utilized since their turnover rate is too high) at the GS-2 level. The total cost used for these civilian cashiers may be reducible since under the test of the a la carte concept at NAS Alameda the mess attendant contractor assumed the cashiering function, while the military cooks assumed the serving and some sanitation functions at a minimal increase in contracting costs. Fourth, the dining facilities must be renovated for traffic control partitions to insure that patrons cannot obtain food on a serving line without passing a cashier to pay for the food. The estimated cost of these renovations is $150,000 for the Travis AFB site. Fifth, computer system support is necessary under a la carte operation including a maintenance programmer, computer time, and disk storage for the menu item pricing program. Sixth, the cost of rental/or purchase of an appropriate number of cash registers must be included. Finally, the study at NAS Alameda indicated that if BAS attendance increases offset to a significant extent former SIK attendance decreases, the other costs, particularly labor, for the BAS/A La Carte system remain approximately the same as those for the conventional system. If, on the other hand, the BAS attendance increase under the BAS/A La Carte system does not offset the former SIK attendance decrease, then less labor will be required thus reducing the costs over those of the conventional system.

A cost comparison between the conventional system and the BAS/A La Carte is presented in Table 14. The total number of weighted rations served is lower under the BAS/A La Carte system and, therefore, the net value of issues (food costs) decreases. Former SIK personnel, who will now subsist on BAS, will use the system at the unmarried BAS attendance rate. This rate is significantly less than the SIK attendance rate, and this reduction is not completely offset by an increase in the attendance rate of airmen originally on BAS. Since fewer rations will be served under all BAS, a commensurate reduction in labor and, therefore, labor costs results. Further, the cost of paying former SIK personnel their BAS increases systems costs considerably. Also, the significant costs of cashier salaries ($153,356), computer system support necessary for item pricing system updates ($9044), and the annualized cost of necessary facility renovations ($24,413) to create the required customer traffic flow through the serving line to the cashier increases total system costs over those of current operations. A summation of cost changes incurred by BAS/A La Carte indicates an overall increase in annual costs will result of $920,485 for implementation of a BAS/A La Carte system in place of the conventional system.

The BAS/A La Carte system does increase cost, but there are a number of benefits to be derived by the consumer under BAS/A La Carte. First, the BAS consumer will benefit since now he will be able to purchase whatever food items he desires and only pay for the food items consumed. Second, in the conventional system if a person subsisted on SIK and he missed a meal it was, in fact, a loss to him (even more of a loss if he spent money to eat a meal in some other facility), but a gain or savings for the government. By being on BAS he receives his full entitlement regardless of his eating habits. Finally, the BAS A La Carte system provides for a more efficiently run food service system primarily through tighter controls on all food items necessitated by having to balance cost of issues against earned income, but this is a benefit of the a la carte aspect and not the all BAS policy.

In summary, the BAS/A La Carte alternative is responsive to the consumers' desires, and incorporates the tighter cost controls and better management procedures, but at greater expense and at a cost to the former SIK's nutritional intake. It should be noted, however, that the benefits derive from a la carte operation while the negative aspects result from the all BAS policy.

A derivative of BAS/A La Carte has been developed which has many of the advantages of the A La Carte system yet does not have the disadvantage of exhorbitantly increasing costs, and reducing nutritional intake for SIK customers. This option of the a la carte system is entitled Modified A La Carte. The main difference between BAS and Modified A La Carte is that under Modified A La Carte, enlisted personnel who subsist on SIK remain in that status with all their normal dining hall privileges. Some personnel who subsist on SIK may prefer this system since they will always be able to eat as much as they desire in appropriated fund facilities. The personnel who subsist on BAS, moreover, will be able to pay for food on an item-by-item basis in appropriated fund facilities, which makes the system much more responsive to BAS personnel needs. This should bring about increased BAS personnel attendance.

Table 14

Cost Comparison Between Conventional and BAS A La Carte Systems at Travis AFB
(Based on Information From a Test at NAS Alameda)

	Conventional	BAS/A La Carte
Total Annual Weighted Rations	526,607	397,178
Annual Direct Costs		
1. BAS Allowance	6,379,981	7,897,596
2. Net Value of Issues (food costs)	1,390,506	905,685
Sub-Total	7,770,478	8,803,281
3. Less Receipts	412,790	637,100
Sub-Total	7,357,697	8,166,181
4. Change in Labor Cost	–	-94,312
5. Cost of Additional Civilian Cashiers	–	153,356
6. Renovations (Amortized Over 10 Years)	–	24,413
7. Cash Register Rental	–	19,500
8. Computer System Costs		
a. Maintenance Programmer		2,444
b. CPU Time		6,000
c. Disk Storage		600
9. GRAND TOTAL	7,357,697	8,278,182
10. Annual Increased Cost Over Conventional System		920,485

A cost analysis of Modified A La Carte at Travis AFB was also performed in order to evaluate its implications. This analysis is again based on a NARADCOM test of a la carte operations at the NAS Alameda (see appendix M for details) cost comparison is presented in Table 15. As shown, the total number of weighted rations served will increase considerably. This is a definite benefit of the system since now the enlisted personnel will make much more use of the appropriated fund dining halls. Also, this has a very positive effect on their nutritional intake and morale and insures an appropriate training base for cooks. As is expected, the costs of the new system will increase with the increased volume, but the increase in revenues collected helps to offset this increase.

In summary, the Modified A La Carte system requires a projected annual increased cost of $150,489 at Travis AFB when compared to the conventional system, however, it serves 23% (123,000) more rations. This increase of 123,000 rations for an increased cost of $150,489 implies a $1.22 per ration total incremental cost. The Modified A La Carte system, therefore, offers an alternative to the conventional system which is less costly than BAS/A La Carte, and which is far more responsive to BAS personnel needs while retaining the same benefits for personnel who subsist on SIK as those received under the conventional system, and which provides for the same increased efficiency of operations and tighter controls as the BAS/A La Carte system.

V. Summary and Recommendations

A wide selection of feasible alternatives to the current Air Force food service program were considered and analyzed to determine the costs and benefits of each to the Air Force. The purpose of this effort was to define new food service management systems which meet or exceed the current standards of food service on Air Force bases while generating cost savings when compared to the current system. A wide selection of feasible alternatives have been considered ranging from one organization having complete responsibility for all food services on a base to minor changes and improvements in the current system. Each feasible alternative was presented with a commentary on its advantages and disadvantages to the Air Force and with a projection of associated savings or costs to the government. It should be noted that while some alternatives generate large cost savings, in many instances these same alternatives require much greater reorganization or even legislative action, and, therefore, have a greater impact on current Air Force food service system. Further, many of the alternatives impact on a number of separate Air Force organizations, and some of these organizations have indicated a reluctance to surrender any of their autonomy.

A totally new concept to the military of food service contracting has been defined which involves allowing a commercial firm to operate food services on Air Force bases on a profit/loss basis while paying the Air Force a percentage of gross sales for the privilege. Although this concept is new to the military, it has been used successfully by universities and airports. The commercial firm will be responsible for the entire food service operation to include all food, labor, new equipment, utilities, and maintenance. This contract gives the commercial firm direct access to a segregated large market including the entire base population of enlisted, officer, dependent, and civilian personnel. In return for the right to operate commercial profit/loss food service operations on the Air Force base, which provides great potential for considerable

Table 15

Cost Comparison Between Conventional and Modified A La Carte Systems at Travis AFB (Based on Information From a Test at NAS Alameda)

	Conventional	SIK/A La Carte
Total Annual Weighted Rations	526,607	649,670
Annual Direct Costs		
1. BAS Allowance	6,379,981	6,379,981
2. Net Value of Issues (food costs)	1,390,506	1,481,443
Sub-Total	7,770,487	7,861,424
3. Less Receipts	412,790	637,100
Sub-Total	7,357,697	7,224,324
4. Increase in Labor Costs	–	77,549
5. Cost of Additional Civilian Cashiers	–	153,356
6. Renovations (Amortized Over 10 Years)	–	24,413
7. Cash Register Rental	–	19,500
8. Computer System Costs	–	
a. *Maintenance* Programmer		2,444
b. CPU Time		6,000
c. Disk Storage		600
9. GRAND TOTAL	7,357,697	7,508,186
10. Annual Increased Cost		150,489

profits, the commercial firm will pay the Air Force a specified percentage of gross sales as a form of rent. The enlisted personnel who receive subsistence-in-kind (SIK) will continue to subsist at the government's expense in the contractor's food outlets. The contractor will be reimbursed by the Air Force for all SIK meals consumed in their facilities. The reimbursement rate per meal will include the contractor's cost of food, labor, utilities, maintenance and a specified amount for profit. The actual reimbursement rate will be established using the BDFA as the basis. For example, if the BDFA equals $3.00 and the contractor's average percentage food cost is 40% of gross sales, then the reimbursement rate would equal $3.00/0.40 = $7.50 for a breakfast, lunch, and dinner. The actual rate per meal could be set using the current system of twenty percent for breakfast, and forty percent for lunch and dinner. All cash customers, including enlisted personnel on BAS, will pay the contractor's posted prices at the register. It should be noted that this is a departure from current Air Force practice vis a vis BAS customers, even in a la carte facilities, in that the contractor's prices reflect total costs plus profit rather than just raw food costs as is current practice in the enlisted dining facilities.

The commercial profit/loss contracting alternative was defined under three alternative scales of implementation. The first alternative is Total Base Management, which involves a large commercial firm operating all base food services including the appropriated fund, hospital, MWR and AAFES food operations. It became clear, however, during this project effort that some organizations wished to retain control of their food services. AAFES, in particular, had a large, well run food service program and desired to retain it in its entirety. Therefore, the second alternative, entitled Dual Base Management, involved commercial P/L operation of all base food services (appropriated fund, hospital and MWR) with the exception of AAFES. Finally, in the event that the hospital and MWR also desired to retain their current food service program, a third alternative involving commercial P/L operation of only the appropriated fund facilities was presented.

Three options were considered under each of the three alternative scales of implementation of commercial profit/loss operation. Options one and two provide for the renovation and expansion of the current system in order to better meet the base population needs and desires for food service. Option one requires the contractor to fund all renovation and construction costs. This has the advantage of placing the financial responsibility of funding the renovation and construction costs on the contractor. However, in order for the contractor to amortize these costs, this option has the disadvantage of requiring a longer contract period and a lower reimbursement rate to the Air Force. Option two requires the government to fund new facility construction and renovation. This option has the advantage of a shorter contract period and increased reimbursement to the Air Force since the contractor has less costs to amortize. However, a major disadvantage of this option is that if Military Construction Appropriation (MCA) funds are required, the long lead time and frequent cancellations may make this option non-feasible. Finally, option three, **status quo**, retains the current system with no major renovations or construction. This has the advantage of being easily implementable with a short contract life and higher reimbursement rate. However, it has the disadvantage of not renovating and creating new facilities to better meet the needs of the base population. Further, the success of this option is a strong function of the adequacy and acceptability of existing facilities.

It must be emphasized that in no case is it suggested that contract operation, or operation by any operator other than the Air Force, be implemented at all Air Force bases. The Air Force must maintain a sufficient training base of food service operations to retain **blue suit** food service personnel in a state of readiness for contingencies and/or war.

The commercial profit/loss concept generates significant cost savings since the amount of money saved by shifting operating responsibility for food service to a contractor coupled with the contractor's reimbursement and the taxes on his profits far exceed the cost of reimbursing the commercial firm for the SIK meals. The summary projected cost savings of each of the commercial profit/loss alternatives (Total Base, Dual Base, and Appropriated Fund only) for each option are presented in Table 16, and as one can see from scanning the table, they are substantial. In order to provide for realistic projections, the initial analyses of commercial profit/loss operation were performed by a large commercial contracting firm, ARA Food Services Co., while under contract to NARADCOM, based upon Travis AFB as a typical large Air Force base.

The analysis, based on ARA's assumptions, reveals that approximately equal cost savings are achieved under options 1 and 3. Option 1, however, creates new facilities to better meet the needs of the base population. The level of option 3 cost savings, moreover, result from the large variety of relatively modern food service facilities at Travis AFB. At bases with marginal facilities or with an insufficient variety of facilities cost savings might be significantly lower and/or a suitable contractor might not bid on the contract. Option 2 generates the lowest cost savings and would appear to be impossible to implement due to the lead time and difficulty of MCA funding at the level required.

It should be emphasized that the key elements for the success of commercial contract profit/loss contracting are: (1) that the contracts only be awarded to large, experienced food service firms, (2) that the new proposed contracting technique be used, and (3) that contracts be let only at selected bases rather than Air Force wide to avoid jeopardizing the training base for **blue suit** cooks necessary for military contingencies.

As ARA has assumed a constant SIK attendance rate of 56% under all alternative systems and options and that SIK's would only be able to eat for free using their meal card in the enlisted facilities, NARADCOM personnel felt that additional analysis was necessary. This additional analysis assessed the impact of adjusting the SIK attendance rates to reflect (1) meal card privileges for SIK personnel at any of the commercially operated facilities rather than just the enlisted dining facilities, and (2) increased SIK attendance under options 1 and 2 which provide for the renovation of existing facilities and the creation of new facilities. The results of the NARADCOM analyses are also presented in Table 16. It will be noted that the SIK attendance rate for each of the alternatives under option 3, **status quo**, increases as the contractor operates more and more facilities on the base to reflect the fact that SIK attendance rate is related to the number of available facilities. That is, variety and convenience of the location is a strong determinant of customer attendance. The SIK baseline option 3, **status quo**, attendance rate was projected to: (1) increase 25% (from the then current 37% attendance rate at Travis AFB) to a 46% level under the Commercial Appropriated Fund P/L system, (2) increase 35% to a 50% level under Commercial Dual Base Management, (3) increase 40% to a 52% level under AAFES operation of Appropriated Funds, and (4) increase 50%

Table 16

Summary of Projected Cost Savings Using Travis AFB As A Typical Air Force Base

Alternatives	Based On ARA Food Service Company Analysis						Based On NARADCOM Analysis													
									10% Increase in SIK Attendance				20% Increase in SIK Attendance				30% Increase in SIK Attendance			
	Option 3	SIK Att. Rate	Option 1	SIK Att. Rate	Option 2	SIK Att. Rate	Option 3	SIK Att. Rate	Option 1	SIK Att. Rate	Option 2	SIK Att. Rate	Option 1	SIK Att. Rate	Option 2	SIK Att. Rate	Option 1	SIK Att. Rate	Option 2	SIK Att. Rate
1. Commercial Profit/Loss Food Operations Reimbursement Rate*																				
Total Base Management System**	2,269,701	56%	2,234,945	56%	2,011,772	56%	2,269,701	56%	2,068,172	61.6%	1,851,904	61.6%	1,911,260	67.2%	1,701,489	67.2%	1,753,399	72.8%	1,550,164	72.8%
Dual Base Management System**	2,404,917	56%	2,378,215	56%	2,155,205	56%	2,569,779	56%	2,230,112	55.0%	2,013,234	55.0%	2,083,701	60.0%	1,872,885	60.0%	1,936,445	65.0%	1,731,726	65.0%
Appropriated Fund P/L Operations**	1,062,710	56%	1,027,933	56%	841,499	56%	1,344,070	56%	887,007	50.6%	706,408	50.6%	747,637	55.2%	572,809	55.2%	607,490	59.8%	438,464	59.8%
2. AAFES Operations of the Appropriated Fund System***	–	–	–	–	–	–	665,977	52%	–	–	–	–	–	–	–	–	–	–	–	–
3. SIK Reimbursement	–	–	–	–	–	–	419,320	37%	–	–	–	–	–	–	–	–	–	–	–	–
4. A La Carte								****												
BAS	–	–	–	–	–	–	(920,485)	12%	–	–	–	–	–	–	–	–	–	–	–	–
Modified	–	–	–	–	–	–	(150,489)	37%	–	–	–	–	–	–	–	–	–	–	–	–

*Percentage of gross sales paid to the Air Force.
**The NARADCOM analysis assumes a 50% increase over the current 37% SIK attendance rate to 56% for Total Base Management (Status Quo - Option 3)
The NARADCOM analysis assumes a 35% increase over the current 37% SIK attendance rate to 50% for Dual Base Management (Status Quo - Option 3)
The NARADCOM analysis assumes a 25% increase over the current 37% SIK attendance rate to 46% for Appropriated Fund P/L Operations (Status Quo - Option 3)
***The NARADCOM analysis assumes a 40% increase over the current 37% SIK attendance rate to 52% for AAFES Operation of the Appropriated Fund System
****The former SIK personnel now subsist on BAS.

to 56% under Total Base Management (identical to ARA's assumption). Also, it will be noted that a sensitivity type analysis has been conducted as to the effects on the SIK attendance rate of the renovated and new facilities constructed under options 1 and 2. The key point made by this analysis is that even though the absolute level of cost savings under each of the alternatives is greater under the NARADCOM analysis from the cost savings level developed by ARA, the relative ranking of the three options is the same. That is, option 3 yeilds greater savings than options 1 or 2, and option 1 always yields larger savings than option 2. These results are, again, not unexpected since option 3 always feeds fewer SIK customers than options 1 and 2, and, therefore, the cost to the government for SIK meals is naturally lower. Further, as previously mentioned, the level of option 3 savings is a strong function of the adequacy and variety of the existing facilities which at Travis AFB were quite high. Finally, it is fortuitous that option 1 yields higher cost savings than option 2, since, as we previously noted, it may be nonfeasible to, in fact, implement option 2.

Of the organizations presently operating on Air Force bases (Appropriated Fund, Hospital, MWR, and AAFES), AAFES was identified as being capable of assuming increased operational responsibility for food services other than their own. Unfortunately, AAFES was unwilling to perform any detailed analyses for us. However, it was felt that NARADCOM could make reasonably valid projections as to the potential cost savings of AAFES assuming responsibility for providing food service for enlisted personnel presently subsisted by the Appropriated Fund food service.

The AAFES operation of appropriated fund food service assumes that AAFES operates a sufficient number of outlets (both their own and the enlisted dining facilities) to provide food service to enlisted personnel, particularly to personnel on SIK, as well as their normal customer load. AAFES would operate all its facilities, including any dining halls, as profit/loss cafeterias. SIK personnel would, however, subsist in any of the AAFES food facilities at the government's expense. The government reimbursement to AAFES for the SIK meals would be identical to the procedure utilized under the commercial profit/loss system. As Table 16 indicates, the cost analysis of this form of AAFES operation project savings of $665,977 which is less than the savings under commercial P/L option 3, **status quo**, operation of the appropriated fund system. One significant reason for this lower level of savings is that AAFES would not pay a fee to the Air Force for the right to operate on Air Force bases as a commercial firm would. A second major reason is that the SIK attendance rate is assumed to 52% under AAFES operations as opposed to 46% under commercial P/L operation since under AAFES operation it was assumed an SIK customer could eat for free at any of the AAFES food service outlets. This alternative of AAFES operation of appropriated fund food service is easily implemented if AAFES is agreeable and suitable control is exercised to avoid mixing appropriated and non-appropriated funds.

An even more easily implemented alternative in the appropriated fund area which generates considerable cost savings, entitled SIK Reimbursement, was also defined. This alternative requires the closure of the appropriated fund dining halls on weekends and holidays and provides for the subsistence of SIK personnel in other designated base food service facilities. These designated facilities would include several of the MWR and AAFES facilities currently open on the base. The SIK personnel would eat for free, up to a specified level, and the designated

facility would be reimbursed by the government for the SIK meals. The payment for the SIK meals would be similar to that under the commercial profit/loss scenario in that the reimbursement rate would include the cost of food, labor, utilities, maintenance, and a specified amount for profit. The closure of the appropriated fund facilities during weekend and holiday periods will generate significant cost savings. Since SIK utilization of the dining halls is typically low on weekends, it is expected that the designated facilities would be able to handle the SIK demands. This alternative generates annual cost savings of $419,320 as indicated in Table 16. This savings is lower than some of the other large-scale alternatives, but this alternative has the advantage of being much easier to implement.

A brief analysis of a la carte systems was also included for the sake of completeness. Two versions were addressed, BAS and Modified A La Carte. BAS/A La Carte requires all personnel to subsist on BAS and pay for meals on an item-by-item basis. Modified A La Carte requires SIK personnel to remain in that status, but they may eat all they desire for free. While the BAS/A La Carte system was not found to be cost effective, the Modified A La Carte system would feed 23% more rations at a total cost increment of only $1.22 per ration. Moreover, the Modified A La Carte system does provide additional benefits to the Air Force. These benefits include tighter controls on food costs and increased service to the BAS customer who may now purchase food on an item-by-item basis.

Finally, in the event that all the Air Force organizations are reluctant to alter their current food service program, a Board of Governors system is proposed. This system does not change the current Air Force food service program, but requires that the head of each organization that offers food service join the Board of Governors. The purpose of the board will be to oversee the base wide food service program and make recommendations to increase operating efficiency and effectiveness. This would be accomplished by eliminating unnecessary competition, insuring that each food service organization did not have to maintain more than its share of losing or marginal operations, and surveying the base population to be certain that the base food service requirements are being met.

It seems appropriate that the Air Force carefully review all of the alternatives presented in this report and select one or more for implementation at least in a test setting. These decisions must consider more than merely the annual cost savings of an alternative or option since there are subjective benefits, particularly to Air Force personnel morale, that must be included. Further, some of these alternatives require substantial reorganization of the current Air Force food service program, and, therefore, major policy decisions may be required before implementation may begin.

While realizing that the final decision as to whether any of these alternatives will be implemented or tested is up to the Air Force, we would like to recommend the testing of several alternatives. First, the SIK Reimbursement System generates sizable cost savings and could be fairly easily tested at a small Air Force base. This test could be performed in the short term since no procurement contract is required. Further, the two organizations that would provide designated facilities, MWR and AAFES, have shown some interest in this alternative.

Second, we recommend the Air Force test AAFES operation of appropriated fund food service. This also could be tested in the short term since no procurement contract is required. The cost savings of this alternative are not as great as under commercial P/L operation of appropriated fund food services, but this alternative has the advantage of retaining all base food services under the control of military organizations.

Third, the Air Force should test commercial profit/loss operation of the appropriated fund system. This will require a longer lead time than SIK Reimbursement and perhaps a longer commitment to the test. However, the potential cost/benefits of this alternative are considerable. Option 3, **status quo**, could be tested faster since no renovation or new facility construction is required. However, the base chosen for a test of this option should have adequate facilities or finding a suitable contractor may be very difficult.

Fourth, and finally, the Air Force should seriously consider testing one of large scale alternatives (Total and Dual Base Management) to evaluate the feasibility of such a radical change to existing operations.

This document reports research undertaken at the US Army Natick Research and Development Command and has been assigned No. NATICK/TR–81/004 in the series of reports approved for publication.

APPENDICES

INTRODUCTION TO APPENDICES

The appendices of this report include the details of the analysis ARA Food Service Co. performed in order to determine the costs and benefits of commercial profit/loss food service operations on air force bases. We present the analyses directly as ARA submitted them to NARADCOM, except that the two new food outlets, the Travesty and Pasquale's Tamale were moved to different profit centers. The ARA analysis identified these two new outlets as being under the AAFES profit center. However, the AAFES group of food outlets is not included under commercial control under Dual Base Management and Commercial P/L operation of Appropriated Funds. Therefore, NARADCOM personnel moved Pasquale's Tamale from AAFES to the Appropriated Fund profit center and moved the Travesty to the MWR profit center. This is logical since the Appropriated Fund system is experienced in fast food operations, like Pasquale's Tamale and the MWR group is experienced in night club and liquor service operations, like the Travesty. Moving Pasquale's Tamale to the Appropriated Fund profit center will allow its inclusion in all three alternatives, while moving the Travesty to the MWR profit center will allow its inclusion in two alternatives: Total and Dual Base Management. The profit/loss statements of the profit centers and in some instances of the facilities were adjusted to reflect these changes, but the overall ARA analysis has not been altered.

APPENDIX A

APPENDIX A

COMMERCIAL PROFIT/LOSS OPERATION OF AIR FORCE FOOD SERVICES UNDER THE TOTAL BASE MANAGEMENT CONCEPT

The assumptions made by ARA Food Service Co. in performing the analysis of a commercial firm operating food services on a profit/loss basis on Air Force bases are presented in this appendix. These assumptions are valid for each commercial alternative and option. Additional assumptions that pertain only to one profit center (ex. AAFES or MWR) are presented in the following appendices that pertain to those profit centers.

The items itemized on all the projected profit/loss statements are described. Further, all items that are to be included under Direct Expenses, and are, therefore, the responsibility of the contractor, are explicitly stated.

The reader should refer to appendices B to E for ARA's analysis of each profit center and to appendix H for a summary of Total Base Management by a commercial firm.

THE ARA ASSUMPTIONS

In order to develop this scenario, certain assumptions were made. Travis AFB has never had the total food service operations contracted on a profit and loss basis. It is probably safe to say that the statement holds true for every other Air Force base in the Continental United States. It follows then, that few, if any, individuals in this country could state unequivocally the exact conditions necessary for a successful profit/loss commercially operated, base-wide food service system. This is as true for the best contract food service operators as it is for military personnel who are experts in military feeding.

A certain set of conditions must prevail in order to interest the private sector in operating a base-wide food service program on a profit/loss basis. Therefore, certain assumptions were made as to the conditions precedent to a contractor accepting a profit/loss contract on a federal reservation. Listed below are the conditions believed to be necessary for a profit/loss operation.

These conditions or assumptions apply to the base-wide food service operation. In this analysis profit centers were established for each organization in order to delineate how each organization will benefit by the profit/loss scenario. There are certain assumptions that must be made for each of the three major profit centers that do not apply across the board. In those instances, those assumptions will be noted under each profit center description.

1. The contractor will provide and pay for all labor and management and have full control over all employees.

2. The contractor shall have an option on its source of food procurement as well as other goods and supplies.

3. The contractor will provide and pay for a meal identification system which will verify entitlements, meals taken and amount consumed. This is for SIK personnel.

4. The contractor will be free to set prices so as to maintain a food cost percentage-of-sale price at 40% or below.

5. The rate charged to the government for SIK personnel is to be adjusted monthly in accordance with the change in basic daily food allowance value as computed on AF Form 200.

6. The government will provide initially that all present equipment is in good working order. Maintenance and repair of facilities are assumed to be 1.5% of gross sales but should not exceed $65,000 per year in any profit center. Limitation of liability – the repair or replacement or major component parts, at one time, whose costs equal or exceed 10% of original cost of the equipment involved, but not less than $25 – will be provided by the government.

7. Assume a return of 5% to the government for the right to do business. If investment in facilities is required, the return to the government will be reduced from 5% on a sliding scale to cover the cost of the investment. If the contract is cancelled by either party, the government must agree, in advance, to reimburse the contractor for the unamortized balance of the investment or provide that the balance be the responsibility of the successor contractor. This type of agreement is commonly referred to as a "buy-back agreement."

8. Assume that the contractor's administrative expense is 5%.

9. Assume that the contractor has a profit goal of 6%.

10. The contractor will be free to develop menus and menu cycles that will meet or exceed the DoD Index Standard of Excellence for Nutrition and Customer Acceptance.

11. All food on the base will be sold a la carte.

12. SIK personnel will have cash equivalent allowances for each meal. All charges over the allowance will be paid in cash by the SIK customer. All other customers will be on a cash basis.

13. Reimbursement for SIK will be computed monthly in accordance with the computation of reimbursement for SIK described in Appendix 6. Each SIK customer will be allowed to go through a service line as frequently as he/she wants until his/her maximum meal allowance is used.

14. If investment in facilities and equipment are required, the costs, including interest, will be depreciated over a ten-year period and included in costs. The return to the government will be correspondingly affected.

15. If the contractor is required to make a major investment, the government will agree to a ten-year contract. The investment will become the property of the Air Force at the end of the contract.

16. The contractor will provide and pay for all accounting services.

17. The contractor will provide and pay for all insurance and licenses needed to operate the facilities.

18. The contractor will take over each operating unit free and clear of any undepreciated amounts for equipment or leasehold improvements.

19. The government will supply an adequate initial inventory of expendable ware (pots & pans, etc.) and serviceware; the contractor will maintain such inventory as part of the direct expenses.

20. Data collected at Travis AFB indicates that the utility cost varies from one profit center to another. Therefore, it will be noted that all three of the major profit centers have different formulas for computing utility cost. This is due, in part, to the availability of historical operating data.

21. All of the analyses in this volume are based on the population size and food service operating data collected at Travis AFB during January 1978. Changes in the population size or in that basic data will change the results and the reliability of the analysis contained herein.

OTHER EXPENSE ITEMS ITEMIZED SEPARATELY ON OPERATING STATEMENT

Utilities

An estimated cost of 5% of sales but not to exceed $185,000 was used for all Appropriated Fund locations except the hospital. Utilities include gas, water, electric, steam, sewage, and trash removal.

Maintenance Cost

An estimated cost of 1.5% of sales but not to exceed $65,000 was used for all Appropriated Fund locations except the hospital. Maintenance includes facility and equipment repair costs. Limitation of liability – the repair or replacement of major component parts, at one time, whose cost equals or exceeds 10% of original cost of equipment involved, but not less than $25.00, will be provided by government.

Return to Government

Assumed a return of 5% of sales to government for right to do business. If investment in facilities are required, the return to the government will be reduced on a sliding scale to cover investment with a two-way buy-back on unamortized balance if the contract is voided.

Government Contract Administration Cost

Assumed cost for government contract administration cost is $50,000 for Appropriated Fund locations except the hospital.

Amortization

An estimated annual amortization cost, including interest, of $583,294 was used for renovation of the three Dining Halls. The amortization would run for ten years.

Table A–1

Items Included in Direct Expense
On Operating Statements

Expense	Responsibility
Office Supplies	Contractor
Telephone	Contractor
Postage	Contractor
Banking Service	Contractor
Health Examination	Contractor
Identification System	Contractor
Truck (2) Depreciation	Contractor
Maintenance & Operation Trucks	Contractor
Promotion/Advertising/Festive Meals	Contractor
Licenses (Business)	Contractor
Cafeteria Supplies (Paper, Cleaning)	Contractor
Laundry Personnel	Contractor
Replacement (China, Glass, Silver)	Contractor
General Insurance	Contractor
Taxes (Non-Payroll)	Contractor
Automobile Allowance	Contractor
Other Operating Expense	Contractor
Relocation Expense	Contractor
Training	Contractor
Sick Leave	Contractor

APPENDIX B

APPENDIX B

THE AAFES PROFIT CENTER UNDER TOTAL BASE MANAGEMENT

This appendix provides the details of how a commercial firm would operate the current Army-Air Force Exchange Service (AAFES) food facilities on a profit/loss basis at the test site, Travis Air Force Base. ARA Food Service Co., while under contract to NARADCOM, performed these analyses in order to be certain that the results reflect a commercial firm's viewpoint. The assumptions made by ARA, which they believe necessary in order to make a military installation attractive to a commercial firm, are explicitly stated. The anticipated profit/loss statements, including all costs for any necessary renovations or new facility construction, are provided for each facility. Further, the profit/loss statements delineate the expected reimbursement to the government and the expected profits.

THE ARA ANALYSIS OF THE AAFES PROFIT CENTER

Special Assumptions for the AAFES Profit Center:

1. Facilities included will be as follows: Galaxy Snack Bar, Hot Dog Stand Commissary, Terminal Cafeteria, Delicatessen and Cargo Diner.

2. Contractor will operate all game machines and include their profits as other income.

3. Retail sales will include six packs of beer, wine, individual packages of cigarettes, gum, and mints.

4. SIK personnel would be allowed to use their meal entitlement at the Terminal Cafeteria only. All other locations will be on cash basis.

5. SIK reimbursements will be computed as per Appropriated Fund computations.

6. Utilities are computed on the most recent Y.T.D. operating results available – either October or November, 1977. In cases where there are no available operating figures, 2% of gross sales is used for utilities.

The operating figures developed for the AAFES Scenarios are based on actual statements obtained from the AAFES management at Travis AFB. Included here are October and/or November, 1977 results plus year-to-date 1976 actual figures that were used as the base. Other information not on the operating reports was also taken into account. Therefore, consumption trends or changes in accounting procedures, etc., will modify the operating projections presented in this report.

Under all of the options the retail sales decline has effected total sales. It is assumed that the food service contractor will sell only a few retail items. The formula used to reconstruct sales is illustrated by the following example in the Terminal Cafeteria.

Estimated Y.T.D. 1978 Sales	$937,644	100.0
Less Estimated Retail Sales*	108,766	11.6%
	$828,878	88.4%
Plus Projected Retail Sales	28,129	3.0%**
Total Projected 1978 Sales	$857,007	91.4%

Food cost figures were also adjusted using a similar formula that takes into account the reduced retail sales. Again, the Terminal Cafeteria food cost can be used for illustration:

Estimated Retail Sales X Estimated Retail Costs = Cost of Sales

28,129	X	.729*	=	$ 20,506
828,878	X	.359	=	297,567
				$318,073

*Obtained from 3-month average provided by AAFES management

**Used for all reconstructed sales

Labor costs were affected by the reduction in retail sales in a completely different manner.

The retail sales contribute to the overall profit of AAFES because additional staffing is not required for additional sales. Conversely, a reduction in the level of retail sales would not require a reduction in staffing.

Therefore, labor cost percentage took a significant jump. In addition, labor costs reported on the operating statement under Direct personnel Cost included a credit for Personnel Cost Transfers Out which is income from games. Income from games is shown as Other Income on the projections. Therefore, Personnel Cost-Dollar Paid and Personnel Cost Transfer In were added together but personnel cost transfers out were not included to get total personnel costs. This is illustrated in the following example from the Terminal Cafeteria:

317,417 Personnel Cost Dollar Paid Y.T.D. 10/77

+ 5,274 Personnel Cost Transfer In Y.T.D. 10/77

322,691 Total Personnel Cost for nine months

107,564 Projected Total Personnel Cost for three months

430,255 Total 12 month Projected Personnel Cost

Utility cost was broken out from direct expense from each operating statement and shown as a separate item. The year-to-date utility cost, in many cases, appears to be low by industry and consumer standards, but the assumption was made that a contractor would not be charged any more than AAFES. In some cases, such as the hot dog stand at the commissary, no utility charges are reflected at all on the operating statement. There is, obviously, some plug-in equipment which would generate a small utility consumption, but it may not be enough to separately account for its usage. Therefore, the assumption was made that a contractor's utility charges would be the same (Y.T.D. percentage) as the current AAFES charge. In cases where there is no history of utility charges, 2.0% of gross sales was used. Direct expense calculations are again taken from Y.T.D. actual percentages, either from October or November operating statements. In cases where there is no history, a projected estimate is based upon current industry standards.

Depreciation is figured on a ten year basis under Option 1. The Galaxy Amusement Center will be renovated including an upgrading of signs and service. An estimated $60,480 is needed for that renovation.

As pointed out in the initial assumptions, there will be a return to the government of 5% of sales for the right to do business, except in units that require renovation. In those units, the return has been reduced to 1% of sales due to the cost of depreciation. The net effect of this is an overall return under Option 1 of 0.1% of sales.

In calculating the administrative cost to the government, a figure of $10,000 was used in the total of each option. There was no attempt to prorate this expense into the various units. The $10,000 is basically allocated for a management position that would administer the contract to make certain the contractor fulfills his contractual obligations.

Option 2 uses the same basic premise as 1 but the government makes the investment of capital. Therefore, there is no depreciation charge. In addition, the return to the government increases from 1% to 5% under this option because the contractor has no investment. The net result is a $58,419 increase in operating profit under Option 2.

Option 3, again, is the same as 1 except there are no renovations to the Galaxy Amusement Center. This option does not include the Hof Brau figures which the ARA Study Team recommended closing.

Table B–1

AAFES

Total Option 1

		%		%
Sales			$1,331,623	100.0
Food/Product Cost	541,831	40.7		
Labor Cost	572,716	43.0		
Utilities	6,224	.5		
**Direct Cost	111,285	8.4		
*Amortization	8,470	.6		
Administrative	66,581	5.0		
Return to Government	58,804	4.4		
*Government Contract Administration	10,000	.8		
Total Costs			$1,375,911	103.3
Profit or (Loss)			($ 44,288)	(3.3)
Other Income (Games)			46,908	3.5
Total Profit or (Loss)			$ 2,620	0.2

*Not included in individual location projections.

**$12,445 of direct cost is repairs and maintenance based on Y.T.D. actual percentages.

Table B–2

AAFES

Option 1

Galaxy Snack Bar

		%		%
Sales			$194,420	100.0
Food/Product Cost	$109,070	56.1		
Labor Cost	53,465	27.5		
Utilities	778	.4		
Direct Cost	13,804	7.1		
*Amortization	8,470	4.4		
Administrative	9,721	5.0		
Return to Government	1,944	1.0		
Total Costs			$197,252	101.5
Profit or (Loss)			($ 2,832)	1.5
Other Income (Games)			5,000	2.6
Total Profit or (Loss)			$ 2,168	1.1

*Assumes an investment in facility of $60,480 amortized over ten years including interest.

Table B–3

AAFES

Option 1

Delicatessen

		%		%
*Sales			$125,000	100.0
Food/Product Cost	$62,875	50.3		
Labor Cost	43,612	34.9		
Utilities	475	.38		
Direct Cost	7,550	6.04		
Administrative	6,250	5.0		
Return to Government	6,250	5.0		
Total Costs			127,012	101.6
Profit or (Loss)			($ 2,012)	(1.6)
Other Income			–	
Total Profit or (Loss)			($ 2,012)	(1.6)

*Includes Nut Stand and Ice Cream sales. Also includes gourmet retail sales items which are not the same as retail items sold in other AAFES operations.

Table B–4

AAFES

Option 1

Cargo Diner

		%		%
*Sales			$37,815	100.0
Food/Product Cost	$13,429	35.5		
Labor Cost	14,748	39.0		
**Direct Cost	2,987	7.9		
Administrative	1,891	5.0		
Return to Government	1,891	5.0		
Total Costs			34,946	92.4
Profit or (Loss)			$ 2,869	7.6
Other Income			—	—
Total Profit or (Loss)			$ 2,869	7.6

*Includes 3% retail sales

**No charge for utilities as of November, 1977 operating statement

Table B–5

AAFES

Option 1

Terminal Cafeteria

		%		%
*Sales			$857,007	100.0
Food/Product Cost	$318,073	37.1		
Labor Cost	430,255	50.2		
Utilities	4,971	.58		
Direct Cost	84,850	9.83		
Administrative	42,850	5.0		
Return to Government	42,850	5.0		
Total Costs			923,243	107.7
Profit or (Loss)			($ 66,236)	(7.7)
Other Income (Games)			41,908	4.89
Total Profit or (Loss)			($ 24,328)	(2.8)

*Includes 3% retail sales, plus Hot Dog Stand at the BX sales but does not include Mobile Catering, which is eliminated.

Table B–6

AAFES

Option 1

Hot Dog Stand – Commissary

		%		%
Sales			$117,381	100.0
Food/Product Cost	$38,384	32.7		
Labor Cost	30,636	26.1		
*Direct Cost	2,700	2.3		
Administrative	5,869	5.0		
Return to Government	5,869	5.0		
Total Costs			83,458	71.1
Profit or (Loss)			$ 33,923	28.9
Other Income			–	–
Total Profit or (Loss)			$ 33,923	28.9

*No utility charge

Table B--7

AAFES

Total Option 2

		%
Sales	$1,331,623	100.0
Food/Product Cost	541,831	40.7
Labor Cost	572,716	43.0
Utilities	6,224	.5
**Direct Cost	111,285	8.4
Administrative	66,581	5.0
Return to Government	66,581	5.0
*Government Contract Administration	10,000	.7
Total Costs	1,375,218	103.3
Profit or (Loss)	(43,595)	(3.3)
Other Income (Games)	46,908	3.5
Total Profit or (Loss)	$(3,313)	.2

*Not included in individual location projections.

**$12,445 of direct cost is repairs and maintenance based on Y.T.D. actual percentages.

Table B-8

AAFES

Option 2

Galaxy Snack Bar

		%
Sales	$194,420	100.0
Food/Product Cost	$109,070	56.1
Labor Cost	53,465	27.5
Utilities	778	.4
Direct Cost	13,804	7.1
Administration	9,721	5.0
Return to Government	9,721	5.0
Total Cost	$186,559	101.1
Profit or (Loss)	($ 2,139)	(1.1)
Other Income (Games)	5,000	2.6
Total Profit or (Loss)	$ 2,861	1.5

Table B–9

AAFES

Total Option 3

		$
Sales	$1,331,623	100.0
Food/Product Cost	$ 541,831	40.7
Labor Cost	572,716	43.0
Utilities	6,224	.5
**Direct Cost	111,285	8.4
Administrative Expense	66,581	5.0
Return to Government	66,581	5.0
*Government Contract Administration	20,000	1.5
Total Costs	$1,385,218	104.0
Profit or (Loss)	($ 53,595)	(4.0)
Other Income (Games)	46,908	3.5
Total Profit or (Loss)	($ 6,687)	(.5)

*Not included in individual location projections.

**$10,185 of direct co . repairs and maintenance based on Y.T.D. actual percentages.

APPENDIX C

APPENDIX C

THE MWR PROFIT CENTER UNDER TOTAL BASE MANAGEMENT

This appendix describes the details of how a commercial firm would operate the current Morale Welfare and Recreation (MWR) food facilities on a profit/loss basis at the test site, Travis Air Force base. ARA Food Service Co., while under contract to NARADCOM, performed these analyses in order to be certain that the results reflect a commercial firm's viewpoint. The assumptions made by ARA, which they believe necessary in order to make a military installation attractive to a commercial firm, are explicitly stated. The anticipated profit/loss statements including all costs for any necessary renovations or new facility construction are provided for each facility. Further, the profit/loss statements delineate the expected reimbursement to the government and the expected profits.

THE ARA ANALYSIS OF THE MWR PROFIT CENTER

The contractor will have complete responsibility for operation and management on a profit/loss basis of the food and beverage MWR activities and the Travesty (a new facility recommended by ARA Food Service Co.). The MWR activities include the Officers and Non-Commissioned Officers Clubs, the bowling alley, golf course snack bars, and the Travesty. The MWR staff will not have the day-to-day headaches of running food service operations. However, MWR will receive some of the profits of the facilities in the form of payments calculated as a percent of gross sales.

A number of assumptions had to be made to perform the analysis of commercial MWR profit/loss activities. All the assumptions are now presented.

SPECIAL ASSUMPTIONS FOR THE MWR PROFIT CENTER

1. Sales will increase due to menu innovations, improved quality of food and beverage service.

2. The Clubs will be private (the way the present membership program is operated) during the day operating hours and open to the public during night operating hours. The contractor must have authorization from the Air Force to actively and aggressively promote and sell alcoholic beverages.

3. The contractor will have the exclusive rights to the proceeds from all food and beverage sales, dues income and all sources of other and miscellaneous income ordinarily received by MWR.

4. No commission will be paid to the government on other or miscellaneous income.

5. The contractor will have the right to actively solicit civilian banquets, group and party business.

6. The contractor assumes that total labor dollars will be reduced by more specific planning and forecasting. Manning charts which will be used throughout the entire MWR System (at Travis AFB) will be developed specifically for the system.

7. Productivity will increase through a program for casual (part-time) labor training.

8. For purposes of these analyses, the contractor intends to pay a flat rate of $25,000 in utility costs. Historical operating data from MWR records indicate rather high utility costs for both Clubs. It is believed that the implementation of the contractor's energy program, would reduce utility costs. Since the amount of that reduction is uncertain, a flat rate has been used in these analyses.

9. The contractor would not be obligated to pay the MWR Command Assessment fee which is currently 1% of MWR gross sales.

10. The contractor does not intend to use any Appropriated Fund support monies except, perhaps, where repairs and maintenance of major component parts have exceeded the contractor liability limitations.

11. No administrative expense for the operation of the bowling alley snack bar will be changed by the contractor. The bowling alley snack bar can be supervised by the Clubs' management. An allotment of $21,000 has been made for the cost of government inspection for the MWR units detailed herein.

12. SIK personnel will be allowed to use their allowances at the bowling alley and golf course snack bars.

13. The contractor estimates that remodeling costs for the Officers' and NCO Clubs will be approximately $451,215. This estimate is based on $20 per square foot. A breakdown of those costs by club and area within each club is listed below.

Officers' Club

Area	Estimated Cost	
Edinburgh Room	$ 30,240	
Gold Room	97,125	
Fireplace Room	37,800	
Club Room	33,920	
Cocktail Bar	51,345	
Total	$250,430	$250,430

NCO Club

Area	Estimated Cost	
Night Club	$ 78,600	
Main Bar	36,000	
Small Bar	20,625	
Dining Room	34,960	
Serving Line	30,600	
Total	$200,785	200,785
Grand Total		$451,215

Table C–1

Officers Open Mess Option 1
Profit and Loss Statement

Sales	$ 740,000	74.0%
Other Income	260,000	26.0
Total Income	$1,000,000	100.0%
Cost of Sales	$ 296,000	40.0%
Total Payroll	392,200	53.0
Direct Expenses	133,200	18.0
Utilities and Miscellaneous	25,000	3.4
Commission Paid to Government	2,603	0.3
Government Controlled Administrative Cost	6,000	.8
Administrative Overhead	37,000	5.0
Amortization	34,057	4.6
Total Expenses	$ 926,060	
Profit	$ 73,940	10.0%

Table C–2

NCO Club Option 1
Profit and Loss Statement

Sales	$ 976,259	78.0%
Other Income	275,000	22.0
Total Income	$1,251,259	100.0%
Cost of Sales	$ 401,242	41.1%
Total Payroll	415,886	42.6
Direct Expenses	205,014	21.0
Utilities and Miscellaneous	25,000	2.6
Commission Paid to Government	23,977	2.5
Government Controlled Administrative Cost	6,000	.6
Administrative Overhead	48,813	5.0
Amortization	27,701	2.8
Total Expenses	$1,153,633	
Profit	$ 97,626	10.0

Table C–3

Bowling Alley Snack Bar Option 1
Profit and Loss Statement

Sales	$265,000	
Cost of Sales	90,100	34.0%
Labor Cost	66,250	25.0
Direct Expenses	15,900	6.0
Government Controlled Administrative Cost	4,000	1.5
Government's Commission	45,000	17.0
Total Expenses	$221,250	
Profit	$ 43,750	16.5

No contractor administrative costs are included. This operation will be supervised out of the overhead from the NCO and Officers' Clubs.

Table C--4

Travesty Option 1
Profit/Loss Statement

		%		%
Sales			$180,000	100.0
Food/Product Cost	$71,760	36.8		
Labor Cost	62,220	31.9		
Utilities	3,600	2.0		
Direct Cost	12,960	7.2		
*Amortization	58,100	32.3		
Administrative	9,000	5.0		
Return to Government	1,800	1.0		
Total Costs			219,440	121.9
Profit or (Loss)			($ 39,440)	(21.9)
Other Income			15,000	8.3
Total Profit or (Loss)			($ 24,440)	(13.6)

*$415,000 over ten year period

Table C–5

Officers Open Mess – Option 2
Profit/Loss Statement

		%
Sales	$ 740,000	74.0
Other Income	260,000	26.0
Total Income	$1,000,000	100.0
Cost of Sales	$ 296,000	40.0
Total Payroll	392,200	53.0
Direct Expenses	133,200	18.0
Utilities and Miscellaneous	25,000	3.4
Commission Paid to Government	36,660	5.0
Government Controlled Administrative Cost	6,000	.8
Administrative Overhead	37,000	5.0
Total Expenses	$ 926,060	
Profit	$ 73,940	10.0

Table C--6

NCO Club – Option 2
Profit/Loss Statement

		%
Sales	$ 976,259	100.0
Other Income	275,000	22.0
Total Income	$1,251,259	122.0
Cost of Sales	$ 401,242	41.1
Total Payroll	415,886	42.6
Direct Expenses	205,014	21.0
Utilities & Miscellaneous	25,000	2.6
Commission Paid to Government	51,678	5.3
ARA Overhead	48,813	5.0
Government Controlled Administrative Cost	6,000	5.0
Total Expenses	$1,153,633	
Profit	$ 97,626	10.0

Table C -7

Bowling Alley Snack Bar – Option 2
Profit and Loss Statement

		%
Sales	$265,000	
Cost of Sales	90,100	34.0
Labor Cost	66,250	25.0
Direct Expenses	15,900	6.0
Government Controlled Administrative Cost	4,000	1.5
Government's Commission	45,000	17.0
Total Expenses	$221,250	
Profit	$ 43,750	16.5

No administrative costs are included. This operation will be supervised out of the overhead from the NCO and Officers Clubs.

Table C–8

Travesty – Option 2
Profit/Loss Statement

		%
Sales	$180,000	100.0
Food/Product Cost	$ 71,760	36.8
Labor Cost	62,220	31.9
Utilities	3,600	2.0
Direct Cost	12,960	7.2
Administrative	9,000	5.0
Return to Government	9,000	5.0
Total Costs	$168,540	93.6
Profit or (Loss)	$ 11,460	6.4
Other Income	15,000	7.7
Total Profit or (Loss)	$ 26,460	14.7

Table C–9

Officers Open Mess – Option 3
Operating Statement

		%
Sales	$538,844	72.0
Other Income	210,000	28.0
Total Income	$748,844	100.0
Cost of Sales	$216,465	40.1
Total Payroll	296,365	55.0
Direct Expenses	112,779	21.0
Utilities and Miscellaneous	25,000	4.6
Commission Paid to Government	11,409	2.0
Government Controlled Administrative Cost	6,000	1.1
Administrative Overhead	26,942	5.0
Total Expenses	$694,960	
Profit	$ 53,884	10.0

Table C–10

NCO Club Option 3
Operating Statement

		%
Sales	$ 813,549	76.5
Other Income	250,000	23.5
Total Income	$1,063,549	100.0
Cost of Sales	$ 334,369	41.1
Total Payroll	362,843	44.6
Direct Expenses	192,018	23.6
Utilities and Miscellaneous	25,000	3.0
Commission Paid to Government	21,324	2.6
Government controlled Administrative Cost	6,000	
Administrative Overhead	40,677	5.0
Total Expenses	$ 982,231	
Profit	$ 81,318	10.0

Table C–11

Bowling Alley Snack Bar – Option 3
Operating Statement

		%
Sales	$265,000	
Cost of Sales	$ 90,100	34.0
Labor Cost	66,250	25.0
Direct Expenses	15,900	6.0
Government Controlled Administrative Cost	4,000	1.5
Government's Commission	45,000	17.0
Total Expenses	$221,250	
Profit	$ 43,750	16.5

No administrative costs are included. This operation will be supervised out of the overhead from the NCO and Officers Clubs.

*This operating statement is the same throughout all alternatives.

APPENDIX D

APPENDIX D

THE APPROPRIATED FUND PROFIT CENTER UNDER TOTAL BASE MANAGEMENT

This appendix provides the details of how a commercial firm would operate, on a profit/loss basis, the Appropriated Fund food facilities, as well as a new fast food facility entitled, Pasquale's Tamale at the test site, Travis AFB. ARA Food Service Co., while under contract to NARADCOM, performed these analyses in order to be certain the results reflect a commercial firms viewpoint. The assumptions made by ARA, which they believe necessary in order to make a military installation attractive to a commercial firm, are explicitly stated. The projected profit/loss statements including all costs for any necessary renovations or new facility construction are provided for each facility. Further, the profit/loss statements delineate the expected reimbursement to the government and the expected profits.

The ARA projections of the number of meals expected to be consumed by enlisted SIK and BAS personnel, officers, and civilians are provided.

THE ARA ANALYSIS OF THE APPROPRIATED FUND PROFIT CENTER

The contractor will have complete responsibility for both operations and management on a profit and loss basis for all appropriated fund food services on Travis Air Force Base. The contractor will pay the government a percentage of his gross sales for this privilege.

The contractor will use the Galaxy (Dining Hall #1), Star Lifter (Dining Hall #7), Chuckwagon (Dining Hall #3), SAC Alert Dining Hall and the Flight Line Snack Bar (S–13). The three Dining Halls (#1, #7 and #3) will be renovated to incorporate a chicken shack type of operation in each. The present Chicken Shack (S–100) will not be retained also included is a new fast food operation, Pasquale's Tamale.

Under Option 1 Profit and Loss Statement, the cost of renovation of the three Dining Halls, plus interest, is included as an amortization expense. This expense is computed by amortizing the total renovation cost plus interest over a ten-year period.

In Option 2 Profit and Loss Statement, the amortization expense is not shown as all renovation and new construction will be paid for by the government.

Since there will be no renovation or new construction under Option 3 the Chicken Shack (S–100) will be retained as presently used and not integrated into each of the Dining Halls.

All facilities operated by the contractor will be open to all military and civilian customers except where access is restricted for security purposes. Dining Halls #1, #3 and #7 will offer complete meal service for the regular three meal periods per day, Monday through Friday, and Dining Hall #1 will operate on weekends and for the midnight meal. Under Options 1 and 2, the menu formerly offered in the Chicken Shack will be available in the dining halls for lunch and dinner. Under Option 3 the Chicken Shack (S–100) will provide service for lunch and dinner seven days a week. The Flight Line Snack Bar (S–13) will be open daily for late lunch and dinner under all three Options. SAC Alert Dining Hall will provide service seven days a week for breakfast, lunch, and dinner under the three options.

All service in these locations will be a la carte. Customers, except SIK personnel, will pay at the cash register the actual cash value of the foods selected. Those entitled to ration in kind will be given a monetary allowance for each meal. If the purchase exceeds the allowance, the customer will be required to pay the difference in cash.

Adequate control procedures will be provided to control SIK entitlement and to accurately ascertain the number of meals served at any meal period.

The contractor will be free to develop his own menus and menu cycle that will meet or exceed DoD Index Standards of Excellence for Nutrition and Customer Acceptance. These standards will be met with a three-week cycle menu. A short cycle menu with multiple entrees will provide menu items with consistently high acceptability and which will have a wide appeal to potential customers. This, in turn, will result in higher participation.

A choice of either fast food and/or regular cafeteria items will be available to all customers. In other words, customers will be able to select those items that they prefer to eat.

In-flight meals will be prepared in Dining Hall #1. Based on the current total output from the In-Flight Kitchen, the relocation should not place an inordinate additional workload on Dining Hall #1. This may require increasing the total Dining Hall billets but not the current staffing level of the Flight Kitchen. There may be a slight increase in transportation costs by Fleet Service to pick up the meals, but it should be insignificant when related to the labor savings that will be realized by closing the Flight Kitchen.

Internally, separate costs will be accumulated for providing in-flight meals and, therefore, the inflight operation is listed as a separate entity in the Appropriated Fund profit/loss statements.

In preparing the Profit and Loss Statements for this alternative with the three options, the assumptions which apply only to the Appropriated Fund are listed in assumptions for appropriated funds. The items included in Direct Expense and an explanation of Other Expense Items is explained in Appendix A.

Under Option "1", the Profit and Loss Statement shows an operating loss of $132,186. With amortization cost of $583,294 per year included, it will require increasing the a la carte prices to a point where they would be noncompetitive, which would tend to decrease sales to non-SIK personnel. The effect would have been larger if the full 5% return to the government was used. In the P&L Statement, the 5% was reduced to 1% to partially reduce the effect of the amortization charge.

Utilities were estimated at 5% of sales, not to exceed $185,000 per year, for all Appropriated Fund locations including the hospital. Included are gas, water, electricity, steam, and trash removal. Because there were no firm data available as to the Appropriated Fund's present costs for utilities, the Study Team had to rely on its experience in other operations.

An estimated cost of 1.5% of sales, not to exceed $65,000, for all Appropriated Fund locations including the hospital was used for maintenance and repair of facilities and equipment.

The contractor's liability for these costs will be limited by the following: the repair or replacement of major component parts, at one time, whose cost equals or exceeds 10% of the original cost of the equipment involved, but not less than $25.00, will be provided by the government.

Return to Government is assumed to be 5% of sales for the contractor's right to do business. However, if an investment in the facilities by the contractor is required, the return will be reduced on a sliding scale to cover the investment, with a two-way, buy-back agreement on the unamortized balance if the contract is voided.

The cost for government contract administration was assumed to be a flat rate of $50,000 for Appropriated Fund locations including the hospital. An additional $5000 is included for overseeing the operation of Pasquale's Tamale.

Projected sales are based on the projected equivalent meals served.

The total annual projected meals served by category of customer is shown in the following section entitled Appropriated Fund Meal Projection for Options 1 and 2. Also, projected meals served by meal period and category of customer is shown in the following section entitled, Projected Meal Count by Meal Period for Options 1 and 2.

In the Profit and Loss Statement for Option 2, the same conditions of Option 1 apply except the amortization expense for renovation is not included and the full 5% return to the government is used.

The Profit and Loss Statement for Option 3 has lower sales projected as it is assumed that making no changes in the existing facilities will have a deterrent effect on drawing the additional customers reflected in the statement for Options 1 and 2. Therefore, the projected meal counts for other than SIK personnel are reduced as reflected in the following sections entitled Appropriated Fund Meal Projection for Option 3 and Projected Meal Count by Meal Period for Option 3. Because of the lower meal count, direct expense was reduced by $30,000.

Under all three options, the Profit and Loss Statements are basically the same for in-flight feeding.

In Option 1, the Return to Government is decreased to 1% to help offset the amortization cost for renovation of the Dining Halls.

ASSUMPTIONS FOR APPROPRIATED FUNDS

1. Total charges for utilities are assumed to be 5% of sales but not to exceed $185,000 per year. As not firm data were available, this estimate is based on the Study Team's experience in other operations.

2. Optional assumption for weekend service: Do not operate any Dining Halls if contractor is operating entire base. Permit SIK personnel to eat in Terminal Cafeteria.

3. In-Flight Feeding will be provided from Dining Hall #1.

Table D–1

Appropriated Fund Meal Projections For Options 1 & 2

1600 SIK – 33,600 Meals Entitled Per Week

6580 BAS – 138,180 Meals Entitled Per Week

SIK Participation (projected 56%) = 18,816 Meals Served Per Week

BAS Participation (projected 10%) = 13,818 Meals Served Per Week

Civilians (including dependents) = 997 Equivalent Meals Per Week

Officers = 173 Equivalent Meals Per Week

18,816 X 52 = 978,432 SIK Meals Served Per Year

13,818 X 52 = 718,536 BAS Meals Served Per Year

997 X 52 = 51,844 Civilian Meals (Equiv.) Per Year

173 X 52 = 8,966 Officers Meals (Equiv.) Per Year

1,757,808 Total Meals Per Year

$0.96 Food Cost Per Meal

In-Flight Meals = 69,156

In-Flight Feeding Consolidated in Dining Hall #1

Table D–2

Projected Meal Count By Meal Period For Options One & Two

Based on annualized experience from past operating history, it is estimated that meals served to both SIK and BAS personnel are twenty percent breakfast, forty-nine percent lunch and thirty-one percent dinner. Midnight meal is included in breakfast.

Therefore, the annual meal count for SIK and BAS are:

SIK

Breakfast	978,432	X 20%	=	195,686
Lunch	978,432	X 49%	=	479,432
Dinner	978,432	X 31%	=	303,314
Total				978,432

BAS

Breakfast	718,536	X 20%	=	143,707
Lunch	718,536	X 49%	=	352,083
Dinner	718,536	X 31%	=	222,746
Total				718,536

It is assumed that the greater part of meals served to civilians (including dependents) and officers will be at lunch and dinner with three percent for breakfast, fifty-five percent for lunch and forty-two percent for dinner.

Therefore, the annual meal count for civilians and officers is:

CIVILIANS

Breakfast	51,844	X 3%	=	1,556
Lunch	51,844	X 55%	=	28,143
Dinner	51,844	X 42%	=	21,775
Total				51,844

OFFICERS

Breakfast	8,996	X 3%	=	270
Lunch	8,996	X 55%	=	4,948
Dinner	8,996	X 42%	=	3,778
Total				8,996

All meal count estimates are based on equivalent meals, i.e., sales for any service period are converted to meals by dividing sales by the established meal allowance established for SIK personnel.

Table D–3

Appropriated Fund Meal Projection For Option 3

1600 SIK = 33,600 Meals Per Week

6580 BAS = 138,180 Meals Per Week

SIK Participation (projected 56%) = 18,816 Meals Per Week

BAS Participation (projected 6%) = 8290 Meals Per Week

Civilians (including dependents) = 300 Equivalent Meals Per Week

Officers = 70 Equivalent Meals Per Week

18,816 X 52 = 978,432 SIK Meals Per Year

8,290 X 52 = 431,080 BAS Meal Per Year

300 X 52 = 15,600 Civilian Meals Per Year

70 X 52 = 3,640 Officers Meals Per Year

1,428,752 Total Meals Per Year

$0.96 Food Cost Per Meal

69,156 In-Flight Meals – In-flight Feeding Consolidated in Dining Hall #1

Table D–4

Projected Meal Count
By Meal Period For Option 3

Under Option 3, it is assumed that no changes will be made in existing facilities which may have an effect on drawing additional customers as reflected in Option 1 and 2. Therefore, the projected meal counts for other than military are reduced under this option. Based on same percentage breakdown of meals as used in Options 1 and 2, the meal counts for Option 3 are projected to be:

SIK

Breakfast	978,432	X 20%	=	195,686
Lunch	978,432	X 49%	=	479,432
Dinner	978,432	X 31%	=	303,314
Total				978,432

BAS

Breakfast	431,080	X 20%	=	86,216
Lunch	431,080	X 49%	=	211,230
Dinner	431,080	X 31%	=	133,364
Total				431,080

CIVILIANS

Breakfast	15,600	X 3%	=	468
Lunch	15,600	X 55%	=	8,580
Dinner	15,600	X 42%	=	6,552
Total				15,600

OFFICERS

Breakfast	3,640	X 3%	=	109
Lunch	3,640	X 55%	=	2,002
Dinner	3,640	X 42%	=	1,529
Total				3,640

THE APPROPRIATED FUND OPERATION

OPTION 1

The accompanying Profit and Loss Statement depicts the projected operating results for the Appropriated Fund locations (except hospital) with amortization cost for renovation of the three Dining Halls included.

To make this a viable projection, the a la carte prices would increase five to six percent which would move the prices out of competitive price ranges.

The basic assumptions provided a return of 5% of sales to the government. However, with the increased expense of amortization, it was reduced to 1% of sales.

Also included are flat charges for utilities, maintenance and repair, and government contract administration.

OPTION 2

The accompanying Profit and Loss Statement shows the projected operating results for the Appropriated Fund locations (except hospital) without an amortization charge for renovations included because those costs will be borne by the government. Since the amortization charge is not included, the return to the government is 5%, as stated in the initial assumptions.

However, flat charges are included for utilities, maintenance and repair, and government contract administration.

The basis for determining the number of meals for food cost purposes is detailed in the section Appropriated Fund Meal Projections for Options 1 and 2.

OPTION 3

The accompanying Profit and Loss Statement illustrates the projected operating results for the Appropriated Fund locations (except hospital) without amortization charge for renovation. Under this operation, no extensive renovations will be undertaken in the Dining Halls and Pasquale's Tamale is not included. Return of 5% of sales to the government is included.

Flat charges are included for utilities, maintenance and repair, and government contract administration.

Basis for determining number of meals for food cost purposes is detailed in the section, Appropriated Fund Meal Projections for Option 3.

Because of the lower projected number of meals, a small reduction was made in direct expense.

Table D–5

Operating Statement
Appropriated Fund –
Option 1

	Troop	In-Flight	Total
Sales	$4,291,813	$219,249	$4,511,062
Food	1,687,506	95,104	1,782,610
Labor	1,301,523	65,206	1,366,729
Direct	332,344	7,608	339,952
	$3,321,373	$167,918	$3,489,291
Utilities	174,038	10,692	185,000
Maintenance	61,712	3,288	65,000
Gov't Cont. Admin.	48,000	2,000	50,000
Return to Gov't	42,918	2,193	45,111
Amortization Expense	583,294	–	583,294
	$4,231,335	$186,361	$4,417,696
Admin. Exp.	214,590	10,962	225,552
	$4,445,925	$197,323	$4,643,248
Profit or (Loss)	($ 154,112)	$ 21,926	($ 132,186)

Cost Per Meal: 4,448,920 ÷ 1,757,808 = $2.5309

Cost Per Day: 2.5309 x 3 = $7.5927

Food Cost Per Meal: $0.96

Assumed BDFA $3.00 (computed in normal manner on A.F. #200)

$3.00 ÷ 0.39319 = $7.6298 SIK Ration Reimbursement Cost

Table D-6

Pasquale's Tamale – Option 1

Sales		$200,000
Food/Product	$66,000	
Labor Cost	50,000	
Utilities	4,000	
Direct Cost	20,000	
*Amortization	14,826	
Administrative	10,000	
Govt. Contract Admin.	5,000	
Return to Government	2,000	
Total Costs		$171,826
Profit or (Loss)		28,174
Other Income		–
Total Profit or (Loss)		$ 28,174

*Investment of $105,902 for ten years.

Table D–7

Summary – The Appropriated Fund Profit Center – Option 1

	Appropriated Fund	Pasquale's Tamale	Totals
Sales	$4,511,062	$200,000	$4,711,062
Food Cost	1,782,610	66,000	1,848,610
Labor Cost	1,366,729	50,000	1,416,729
Direct Cost	339,952	20,000	359,952
Sub-Total	$3,489,291	$136,000	$3,625,291
Utilities	185,000	4,000	189,000
Maintenance & Repair	65,000	0	65,000
Gov't Contract Administration	50,000	5,000	55,000
Return to Government	45,111	2,000	47,111
Amortization	583,294	14,826	598,120
Sub-Total	$4,417,696	$161,826	$4,579,522
Administrative Expense	225,552	10,000	235,552
Total Cost	$4,643,248	$171,826	$4,815,074
Profit or (Loss)	($ 132,186)	$ 28,174	($ 104,012)
Other Income	–	–	–
Net Profit or (Loss)	($ 132,186)	$ 28,174	($ 104,012)

Table D–8

Operating Statement
Appropriated Fund - Option 2

	Troop	In-Flight	Total
Sales	$4,291,813	$219,249	$4,511,062
Food	$1,687,506	$ 95,104	$1,782,610
Labor	1,301,523	65,206	1,366,729
	332,344	7,608	339,952
	$3,321,373	$167,918	$3,489,291
Utilities	174,038*	10,962	185,000
Maintenance	61,712*	3,288	65,000
Gov't. Cont. Administration	48,000*	2,000	50,000
Return to Government 5%	214,590	10,962	225,552
	$3,819,713	$195,130	$4,014,843
Administrative Expense 5%	214,590	10,962	225,552
	$4,034,303	$206,092	$4,240,395
Profit	$ 257,510	$ 13,157	$ 270,667

Cost Per Meal: 4,291,813 ÷ 1,757,808 = $2.44157

Cost Per Day: 2.44157 x 3 = $7.32471

Food Cost: $0.96

Assumed BDFA $3.00 (computed in normal manner on A.F. 200)

$3.00 ÷ .39319 = 7.6298 SIK Ration

Reimbursement Cost

Table D–9

Pasquale's Tamale – Option 2

Sales	$200,000
Product/Food Cost	66,000
Labor Cost	50,000
Utilities	4,000
Direct Cost	20,000
Administration	10,000
Govt. Contract Administration	5,000
Return to Government	10,000
Total Cost	165,000
Profit or (Loss)	$ 35,000
Other Income	–
Total Profit or (Loss)	$ 35,000

Table D–10

Summary – The Appropriated Fund Profit Center – Option 2

	Appropriated Fund	Pasquale's Tamale	Totals
Sales	$4,511,062	$200,000	$4,711,062
Food Cost	1,782,610	66,000	1,848,610
Labor Cost	1,366,729	50,000	1,416,729
Direct Cost	339,952	20,000	359,952
Sub-Total	$3,489,291	$136,000	$3,625,291
Utilities	185,000	4,000	189,000
Maintenance & Repair	65,000	0	65,000
Gov't Contract Administration	50,000	5,000	55,000
Return to Government	225,552	10,000	235,552
Amortization	–	–	–
Sub-Total	$4,014,843	$155,000	$4,169,843
Administrative Expense	225,552	10,000	235,552
Total Cost	$4,240,395	$165,000	$4,405,395
Profit or (Loss)	$ 270,667	$ 35,000	$ 305,667
Other Income	–	–	–
Net Profit	$ 270,667	$ 35,000	$ 305,667

Table D–11

Operating Statement
Appropriated Fund – Option 3

	Troop	In-Flight	Total
Sales	$3,880,022	$219,249	$4,099,271
Food	$1,371,602	95,104	1,466,706
Labor	1,301,523	65,206	1,366,729
Direct	302,344	7,608	309,952
	$2,975,469	$167,918	$3,143,387
Utilities	174,038	10,962	185,000
Maintenance	61,712	3,288	65,000
Gov't. Cont. Administration	48,000	2,000	50,000
Return to Gov't.	194,001	10,962	204,963
	$2,453,220	$195,130	$3,648,350
Admin. Expense	194,001	10,962	204,963
	$3,647,221	$206,092	$3,853,313
Profit	$ 232,801	$ 13,157	$ 245,958

Cost Per Meal: $3,880,022 ÷ $1,428,752 = $2.71567

Cost Per Day: $2.71567 x 3 = $8.14701

Food Cost $0.96 per meal

SIK Reimbursement: Assumed BDFA – $3.00 (computed in normal manner)

$3.00 – $.36 = $8.3333 per weighted ration

APPENDIX E

APPENDIX E

THE HOSPITAL PROFIT CENTER UNDER TOTAL BASE MANAGEMENT

This appendix describes in detail how a commercial firm would operate the hospital at the test site, Travis AFB. ARA Food Services Co., while under contract to NARADCOM performed these analyses in order to be certain the results would reflect a commercial firm's viewpoint. The assumptions made by ARA, which they believe necessary in order to make a military hospital food service operation attractive to a commercial firm, are explicitly stated. The projected profit/loss statement including all costs are provided. Further, the profit/loss statement delineates the expected reimbursement to the Air Force as well as the cost of patient meals.

ARA ANALYSIS OF THE HOSPITAL PROFIT CENTER

The commercial firm will operate the hospital food services on basically a contract management basis. This differs from the manner in which the other facilities are to be operated. This is necessary since the military provides medical care for its personnel and, therefore, when enlisted military personnel enter the hospital they should be placed on SIK and the government will provide funds for their subsistence. Similarly, when officers enter the hospital, the government will provide funds for their subsistence requirements.

The special assumptions necessary in order to conduct this analysis of hospital food services are now presented.

SPECIAL ASSUMPTIONS FOR THE HOSPITAL
(The David Grant Medical Center)

- The contract would be based on reimbursement by the government for a specified rate per patient day. The number of patient days would be determined from the hospital's medical records.

- Non-patient meals served, if cash, would be retained by contractor. If such meals are served to persons who subsist on SIK government will reimburse contractor based on the rate specified.

- All other meals, i.e., special functions, department head meetings, free meals (other than SIK would either be reimbursed by the government or treated as cash sales which would be retained by contractor.

- It is also assumed that the hospital cafeteria would be open only to hospital employees, visitors and ambulatory patients. Since it is designed to keep employees on call, an influx of other base personnel might create delays. The cafeteria would operate seven days per week, four meal periods a day, during the hours of 6:00 a.m. to 6:15 p.m. and 11:00 p.m. to 12:30 a.m.

- Cost of nourishments will be included in the patient day rate.

- Patient day rate will include labor, food cost, direct expenses, utilities, equipment repair and maintenance, and contractor's general administration and profit objectives.

- Contractor's direct expenses shall include:

  - Disposables
  - Uniforms
  - Serviceware replacement
  - Expendableware replacement
  - Laundry
  - Cleaning supplies

- Government will provide trash removal and pest control services as part of its program for the entire hospital (would be included in the utilities cost paid to the government by the contractor).

- From a base patient day rate, a sliding scale will be used by contractor to adjust the rate up or down according to census fluctuations. If such fluctuations exceed 3,500 patient days above estimated annual average or fall below 3,500 of the average, a new rate would have to be negotiated.

- Total charges for utilities are assumed to be 5% of sales but not to exceed $185,000 per year. As no firm data was available, this estimate is based on the Study Team's experience in other operations.

PROFIT AND LOSS STATEMENT

LABOR	
Includes all supervisory and non-supervisory	$382,414
FOOD COST	
Based on the service of 240,456 patient meals and 160,512 non-patient meals plus nourishments	388,975
DIRECT EXPENSES	
All other non-food supplies	28,061
SUBTOTAL COSTS	($799,450)
Utilities (5% of $799,450)	39,972
Repairs & maintenance (1.5% of $799,450)	11,991
Rent (5% of $799,450)	39,972
ARA revenue objectives:	
Administration (5% of costs)	39,972
Profit goal (4% of $799,450)	31,978
TOTAL DIRECT EXPENSES	$191,946
TOTAL COSTS	$963,335

In order to recoup $963,335, some assumptions had to be made. At the time of the study, the ARA Study Team did not receive an accurate breakdown of the type of non-patient meals served, i.e., cash sales, SIK guest, etc. So, for the purpose of this study, the following figures are estimates only:

Non-Patient Meal Revenue Projections:

160,512 total meals (annualized)

30% cash = 48,153 meals X $1.50 (selling price)	$ 72,229
70% reimbursed by government: 112,359 X $2.18 = (Maximum daily rate: $6.56) (SIK or other non-cash meals)	244,942
Total non-patient revenue	$317,171

Note: The cash selling price of $1.50 and the SIK reimbursement rate of $2.18 are arbitrary figures, since the actual total cost of a meal is $2.40 ($963,335 divided by 400,968 meals). Therefore, non-patient meals in this situation will be subsidized by the patient services.

Patient Meal Revenue Projections:

240,456 meals = 80,152 patient days on an annualized basis.

Cost to be reimbursed by the government for patient services:

$963,335 – $317,171 =	$646,164
$646,164 ÷ 240,456 patient meals =	$2.69 per meal
$2.69 X 3 per patient days =	$8.07 per patient day
80,152 patient days X $8.07 = (Rounded off figure of $2.69 creates a $663.00 overage)	$646,827
Estimated net patient day cost to government =	$8.07

APPENDIX F

APPENDIX F

THE REIMBURSEMENT FORMULA FOR SIK MEALS UNDER COMMERCIAL PROFIT/LOSS OPERATION

This appendix describes how ARA, using a concept and guideline developed by NARADCOM, would compute the reimbursement cost for meals consumed by enlisted personnel subsisting on SIK. ARA also outlined a control system, using an electronic point of sale terminal, to accurately account for each SIK meal served. Finally, ARA presented how they envision the daily entitlement for SIK personnel to be distributed for each meal.

THE ARA ANALYSIS

To obtain the government reimbursement to the contractor used in comparative total sales cost projections, total sales of $4,291,813 (which does not include the flight-line figures) is divided by total meals of 1,757,808, the result of which is $2.44157 sales per meal.

Total SIK meals of 978,432 times the sales per meal of $2.44157 resulted in the total SIK sales of $2,388,910. This figure is used in all following analyses.

COMPUTATION OF REIMBURSEMENT FOR SIK

As this study is based on all menu items being a la carte in the dining halls, the following system would be employed to determine the number of SIK customers served at any given meal.

The tray price of an SIK customer will be validated and recorded through the Vali-Dine checking system or by some other validation system. The amount validated may be less than full entitlement but would never exceed it. At the end of any meal period, the total value of items taken by SIK personnel will be divided by the allowance for that meal to determine the equivalent meals served. For example, if $809 was sold to SIK personnel at breakfast, $3,978 at lunch and $2,509 for dinner, the total meals for each meal period will be computed by dividing each meal sale by the respective allowance of 1.51 for breakfast, $3.03 for lunch, and $3.02 for dinner.

	Total SIK Sales		Entitlement		# Of Meals
Breakfast	$ 809	÷	1.51	=	536
Lunch	3,978	÷	3.03	=	313
Dinner	2,509	÷	3.02	=	831

To compute weighted rations for SIK reimbursement purposes, the following method will be used:

536 x 0.20 = 107

1313 x 0.40 = 525

831 x 0.40 = 332

Total Weighted Rations 964

Reimbursement for SIK will be:

964. x 7.5641* = $7,291.79

Under this system, it would not make any difference whether a person took a short order meal, partial meal, etc., as total meals are constructed from total meals.

CONTROL SYSTEM FOR SIK

The scenarios for the Appropriated Fund area are based on the assumption that the Dining Halls will be open to civilians (including dependents) and officers, as well as the subsistence in kind (SIK) and the basic allowance for subsistence (BAS) personnel.

Service will be a la carte which will require establishing a cash meal entitlement for each meal for SIK personnel and the establishment of an adequate control procedure at the cash register.

The control procedure must be rapid, determine whether the customer is authorized subsistence in kind, determine amount of entitlement available for a given meal and record the amount of entitlement the customer uses.

This type of control can be obtained with the Vali-Dine System/4 Electronic Point System or equivalent. The system operates either with a photo or without a photo appearing on a magnetically encoded meal card with a four- or five-digit identification number.

Briefly, the system consists of a central processing unit (a mini-computer which has in its storage all authorized customer accounts and their respective attributes). All general housekeeping and data collection duties are done by this unit. Also, part of the system is a CRT Interactive Terminal which upon inquiry, displays the customer account number, all pertinent characteristics about the account such as the number of points (dollars) left in the program, current meal status, etc. It serves to activate the preprogrammed software contained in the central processor. Additional functions performed are: point or dollar allocation by account, invalidation/validation of an account number, the application of a lost card code to an account number, and visual extraction of meal participation data.

At the cash register or checking point, a magnetic card reader terminal with keyboard is located for accepting the customer's card. Upon insertion of the magnetically encoded meal card, the card reader will scan the card and verify with Central Processor Unit (CPU), the

*APA estimated total cost per ration.

validity of the card. Upon the establishment of eligibility to participate in the meal, the card reader will access the CPU and deduct from the customer account the correct number of points or dollars and cents as entered by the checker on the keyboard.

A high-speed line printer will provide a means of obtaining printouts of the statistical data contained in the memory file of the CPU. Various types of information which will be necessary to extract are: customer point or dollar usage by location, by meal period, total number of valid accounts, total amount of unused points per account, etc.

Prior to each meal, the cash entitlement for the meal is credited to each valid account.

When the customer presents his card to the checker/cashier, the card is inserted in the reader to determine if it is valid and the number of points allowed. Each point is a penny. If valid, the cashier enters number of points into the card reader keyboard to correspond to the value of items on the tray. If the value of the tray exceeds the entitled point balance, the customer will pay the difference in cash. If the number of points used is less than entitlement, the customer may return through the line until all points are used during that meal period. The total number of meals served will be calculated after each meal.

Magnetic card readers can be located at many points throughout the base and be connected to the CPU via the telecommunication link.

Once a customer has used all of his point entitlement for a given meal, subsequent use of the card will record as invalid on the card reader. This prohibits the card user from taking the same meal more than once.

If it is deemed necessary for accountability purposes, a signature head count sheet can be maintained. Moreover, the total signatures cannot be greater than the equivalent meals as explained in the section on computation of reimbursement for SIK personnel. However, the number of equivalent meals may be less than the total number of signatures.

MEAL ENTITLEMENT

SIK entitlement per meal will be based on the relationship of the contractor's food cost percentage and the BDFA computed in the normal prescribed manner of A.F. Form 200.

For example, if the BDFA is $2.95 per day and the contractor's food cost for the month is 39% of sales, the daily maximum reimbursement would be $2.95 divided by $0.39 or $7.5641. Entitlement per meal will be established by taking the applicable percentage for each meal as follows:

Breakfast	7.5641 X .20 = 1.51282
Lunch	7.5641 X .40 = 3.02564
Dinner	7.5641 X .40 = 3.02564

The meal entitlement would be rounded off to the nearest cent to make it compatible with the proposed control system covered elsewhere in this study.

APPENDIX G

APPENDIX G

NEW TYPES OF FOOD AND SERVICE PROPOSED BY ARA FOOD SERVICES CO. FOR THE TEST SITE, TRAVIS AIR FORCE BASE

ARA Food Services Co, as part of their analysis at the test site, Travis AFB, identified base personnel demands for several new types of food and service not currently offered at the test site. As part of options 1 and 2, the commercial firm would renovate and/or create new food services to better meet the needs of the base population. At the test site, Travis AFB, ARA recommended the creation of two new operations, the Travesty and Pasquale's Tamale. In this appendix ARA presents a description of these two facilities.

New Facility Construction

a. **Pasquale's Tamale**

Pasquale's Tamale is a fast food restaurant, to be located on Travis Avenue, which features home style pizza and Mexican food. This fast food stand would be located near the library and theater, right on the main street of Travis Air Force Base. There is a small empty building currently in this location, that was used as a fast food restaurant. The building currently there would be completely renovated, enlarged, and would be similar in appearance to fast food operations on North Texas Street, which is located a few miles off base. It would have bright decor with approximately seventy-five seats, counter-type ordering system, takeout and delivery service. Signs inside and outside would be attractive, bright, and easily identifiable with fast food. An image of fast quality food and service would be developed which would appeal to the young enlisted personnel, young families, and people on the go.

This unit would operate seven days per week as follows:

Sunday through Thursday	– 11:00 a.m. – 10:00 p.m.
Friday and Saturday	– 11:00 a.m. – 12:00 p.m.

These hours would capture the lunch crowd, dinner people, and after the movies or bowling crowd. A significant portion of the business will be deliveries to personnel on base, especially on the weekends.

The ARA study team felt that the base population is fast food oriented and would respond to a quality fast food concept. Pizza is served at the Galaxy Amusement Center, and Mexican food is served infrequently on the Terminal Cafeteria menu. Pizza is a very popular fast food attraction as evidenced by the proliferation of chains all over the country such as Pizza Hut, Shakeys, and Pizza Inn. Mexican food is the fastest growing ethnic food in the United States today.

Chains of Mexican sit-down as well as fast food operations are mushrooming all over the South, and plans are afoot to expand into Northern States. ARA feels the combination of quality home-style pizza, beer, and Mexican food specialties would fill a void now existing

on base. Personnel on base must leave the base to get Mexican food or go to the Galaxy Amusement Center to get pizza. Both of these options are inconvenient to a majority of base personnel. The enlisted man or woman with a family may not feel comfortable going to the Galaxy Amusement Center for a pizza; they must travel off the base. This concept makes it possible for all types of military or civilian personnel to feel comfortable coming to Pasquale's Tamale for a meal or having that meal delivered to their residences.

b. **The Travesty**

The Travesty is conceived of as the "ultimate entertainment establishment" on the base. It will be the disco night club. Based on the data from an off-site survey, the Travesty's closest rival will be in San Francisco, fifty miles away. It operates only in the evening from 4:00 p.m. until 1:00 a.m. on Friday and Saturday.

The Travesty will feature cocktails, beer, and wine service, a light menu of stacked sandwiches, gourmet burgers, and a small steak sandwich. Nibbles will also be available on the menu for those who desire a snack with their cocktails.

The location of the Travesty is where the current Hof Brau operation exists. This area is in the middle of the female housing population and near the hub of other base activities. There is a market on base for a small intimate night club featuring recorded music emanating from a super sound system. To go along with this super sound system is dancing to the latest top records. Adding to this total atmosphere package is a moving lighting show that goes from intimate to psychedelic.

The Travesty will have a total seating capacity for 328. Most of the seating will be on raised platforms surrounding the dance floor. This will allow the 302 individuals who are sitting at tables on the raised platform as well as those seated at the bar to have an unobstructed view of the dance floor.

The platforms and the bar fronts will be carpeted. There will be mirrored walls, columns, and window panels. Walls will be adorned with mylar wall graphics. The dance floor and corridors will feature domino wood parquet and the ceiling will have reflective surfaces. Cork laminate will cover table and bar tops. The basic color scheme will be shades of purple.

The Travesty will feature a comfortable lounge for those interested in games such as backgammon, chess, dominoes, electronic tennis, and air hockey. This game area will be partitioned off from the main drinking and dancing areas so that each area has its own identity.

Cocktail waitresses, in complementing uniforms, provide the final part of the package.

The Travesty offers provides military and civilian personnel the opportunity to mix informally. It provides a place to relax, have fun, meet new people, and enjoy the total base experience.

APPENDIX H

APPENDIX H

SUMMARY AND PROFIT/LOSS ANALYSIS FOR EACH PROFIT CENTER UNDER TOTAL BASE MANAGEMENT

This Appendix presents a summary of the entire base food service system under commercial operation with a profit/loss analysis for each profit center. Further, ARA describes the reasons why some profit centers are more attractive, from a commercial firm's or the government's viewpoint.

This appendix also includes a sensitivity analysis, performed by NARADCOM personnel of changes in the SIK Attendance rate and its effect on the overall cost savings of Total Base Management.

APPENDIX H

SUMMARY OF OPTION 1

On the following page is a summary of Total Base Management, Option 1. The summary chart vividly illustrates the possible results under contract food service management with the contractor operating all four major entities. The Appropriated Fund, Hospital, AAFES, and MWR. The reader must remember that the numbers presented on the chart are based on the assumptions and conditions outlined in previous appendices and in the report itself.

Under Option 1, total sales for Travis AFB would be $9,167,279 with a net profit to the contractor of $116,462. It should be remembered that in this option the contractor made the initial investment for renovations and, therefore, an amortization expense is built into the pro-forma.

Perhaps based on ARA's assumptions and projections, the most vivid portrayal of the effect of the amortization expense is in the Appropriated Fund. The Appropriated Fund had total sales of $4,211,662, but suffered a loss of $104,012. A number of expenses contributed to that end result. Examples are the amortization of $598,120, Government Contract Administration expense of $55,000 and a commission to the government of $47,111.

The contractor, however, does not experience a total loss on the Appropriated Fund primarily because an administrative expense of 5% of gross sales is built, in, which in this option amounts to $235,552. In the event the government disallowed the contractor's administrative expense, the results for the contractor would be less than desirable. In that instance, most of the established commercial contractors probably would not entertain such an arrangement on a government installation.

The AAFES food operations under this option had gross sales of $1,331,623, but after the costs of doing business were deducted, the net profit was only $2,620. Suffice it to say, the key to AAFES' suc is in the retail sales, not the food service, and the contractor would only have the responsibility for the food service.

The Morale, Welfare, and Recreation fund is a strong contribution to the profitability of this option. These projected figures are based upon anticipated operating results attributable to the changes in the MWR operations put forth in this study.

The David Grant Hospital will contribute $31,978 on gross sales of $963,335. Because the hospital food service is limited to patients of the hospital, its employees, and individuals visiting the patients, increases in sales above the daily census will be minimal, and, therefore, insignificant to the overall base food services revenue picture. For those reasons the same projected profit and loss statement will be used throughout these analyses.

Table H–1

Summary Total Base Management – Option 1

	Appropriated Fund	Hospital	AAFES	MWR	Total
Sales	$4,711,062	$963,335	$1,331,623	$2,161,259	$9,167,279
Food Cost (Cost of Sales	1,848,610	$388,975	541,831	859,102	$3,638,518
Labor Cost	1,416,729	382,414	572,716	936,556	3,308,415
Direct	359,952	28,061	98,840	367,074	853,927
Subtotal	$3,625,291	$799,450	$1,213,387	$2,162,732	$7,800,860
Utilities	189,000	39,972	6,224	53,600	288,796
Maintenance & Repair	65,000	11,991	12,445	–	89,436
Gov't Contract Administration	55,000	–	10,000	21,000	86,000
Return to Government	47,111	39,972	58,804	73,380	219,267
Amortization	589,120	–	8,470	119,858	726,448
Subtotal	$4,579,522	$891,385	$1,309,330	$2,430,570	$9,210,807
Administrative Expense	235,552	39,972	66,581	94,813	436,918
Total Cost	$4,815,074	$931,357	$1,375,911	$2,507,383	$9,647,725
Profit/Loss	($104,012)	$ 31,978	($44,288)	($346,124)	($480,446)
Other Income	–	–	46,908	550,000	596,908
Net Profit/Loss	($104,012)	$ 31,978	$ 2,620	$ 203,876	$ 116,462

Table H–2

Summary Of Dual Base Management – Option 1

	Appropriated Fund	Hospital	MWR	Total
Sales	$4,711,062	$963,335	$2,161,259	$7,835,656
Food Cost	1,848,610	$388,975	859,102	3,096,687
Labor Cost	1,416,729	382,414	936,556	2,735,699
Direct	359,952	28,061	367,074	755,087
Subtotal	$3,625,291	$799,450	$2,162,732	$6,587,473
Utilities	189,000	39,972	53,600	282,572
Maintenance & Repair	65,000	11,991		76,991
Government Contract Administration	55,000	–	21,000	76,000
Return to Government	47,111	39,972	73,380	160,463
Amortization	598,120	–	119,858	717,978
Subtotal	$4,579,522	$891,385	$2,430,570	$7,901,477
Administrative Expense	235,552	39,972	94,813	370,337
Total Cost	$4,815,074	$931,357	$2,507,383	$8,253,814
Profit or (Loss)	($104,012)	31,978	($346,124)	($418,158)
Other Income	–	–	550,000	550,000
Net Profit or (Loss)	($104,012)	$ 31,978	$ 203,876	$ 131,842

Table H–3

Dual Base Management – Option 2

	Appropriated Fund	Hospital	MWR	Total
Sales	$4,711,062	$963,335	$2,161,259	$7,835,656
Food Cost	1,848,610	$388,975	859,102	3,096,687
Labor Cost	1,416,729	382,414	936,556	2,735,699
Direct	359,952	28,061	367,074	755,087
Subtotal	$3,625,291	$799,450	$2,162,732	$6,587,473
Utilities	189,000	39,972	53,600	282,572
Maintenance & Repair	65,000	11,991	–	76,991
Government Contract Administration	55,000	–	21,000	76,000
Return to Government	235,552	39,972	142,338	417,862
Amortization	–	–	–	–
Subtotal	$4,169,843	$891,385	$2,379,670	$7,440,898
Administrative Expense	235,552	39,972	94,813	370,337
Total Cost	$4,405,395	$931,357	$2,474,483	$7,811,235
Profit/(Loss)	305,667	$ 31,978	($313,224)	($24,421)
Other Income	–	–	550,000	550,000
Net Profit	$ 305,667	$ 31,978	$ 236,776	$ 574,421

Table H--4

Dual Base Management – Option 3

	Appropriated Fund	Hospital	MWR	Total
Sales	$4,099,271	$963,335	$1,617,393	$6,676,999
Food Cost	$1,466,706	$388,975	$ 640,934	2,496,615
Labor Cost	1,366,729	382,414	725,458	2,474,601
Direct Expense	209,952	28,061	320,697	658,710
Subtotal	$3,143,387	$799,450	$1,687,089	$5,692,926
Utilities	185,000	39,972	50,000	274,972
Maintenance & Repair	65,000	11,991	–	76,991
Government Contract Administration	50,000	–	16,000	66,000
Return To Government	–	–	–	–
Subtotal	$3,648,350	$891,385	$1,830,822	$6,370,557
Administrative Expense	204,963	39,972	67,619	312,554
Total Cost	$3,853,313	$931,357	$1,898,441	$6,683,111
Profit/(Loss)	$ 245,958	$ 31,978	($ 281,048)	($3,112)
Other Income	–	–	460,000	460,000
Net Profit	$ 245,958	$ 31,978	$ 178,952	$ 456,888

Table H–5

Comparative Total Cost Projections
Total Base Management – Option 1

Appropriated Fund:	
Cost of Current Operations	$3,985,578
Cost of Contractor Projections	2,388,910
Savings to Government	$1,596,668
Flight-Line:	
Cost of Current Operations	$ 306,417
Cost of Contractor Projections	219,249
Savings to Government	$ 87,168
Hospital:	
Cost of Current Operations	$1,530,937
Cost of Contractor Projections	606,192
Savings to Government	$ 924,745
AAFES:	
Government Profit, Current Operations	$ 189,133
MWR:	
Government Loss, Current Operations	($ 236,320)

SUMMARY OF OPTION 2

The principal difference between this option and Option 1 is that the government makes the investment. In Option 1 the contractor made the capital investment for renovations and, therefore, had the amortization expense of over $700,000 on $9 million in sales.

Option 2 is the optimum operational situation for the contractor on a profit and loss basis. Gross sales remain the same as under Option 1, $9,167,279. The total profit picture is what makes the difference. In every category a profit is realized even though gross sales in those categories remained the same as in Option 1. Total profits amount to $577,734 evidencing profitability in the Appropriated Fund of $305,667, $3,313 in AAFES, and $236,776 contributed from the MWR.

As was pointed out above, the reason for this change in profitability is attributable to the government acceptance of the capital investment cost for renovation and construction. That allows what was previously a major cost to the contractor (amortization) to become income. See the Appropriated Fund column on the accompanying summary sheet as evidence of these facts.

Table H–6

Summary – Total Base Management – Option 2

	Appropriated Fund	Hospital	AAFES	MWR	Total
Sales	$4,711,062	$963,335	$1,331,623	$2,161,259	$9,167,279
Expenses:					
Food Cost	1,848,610	388,975	541,831	859,102	3,638,518
Labor Cost	1,416,729	382,414	572,716	936,556	3,308,415
Direct Cost	359,952	28,061	98,840	367,074	853,926
Subtotal	$3,625,291	$799,450	$1,213,387	$2,162,732	$7,800,860
Utilities	189,000	39,972	6,224	53,600	288,796
Maintenance & Repair	65,000	11,991	12,445	–	288,796
Government Contract Administration	55,000	–	10,000	21,000	86,000
Return to Government	235,552	39,972	66,581	142,338	484,443
Subtotal	$4,169,843	$891,385	$1,308,637	$2,379,670	$8,749,535
Administrative Expense	235,552	39,972	66,581	94,813	436,918
Total Cost	$4,405,395	$931,357	$1,375,218	$2,474,483	$9,186,453
Profit/(Loss)	305,667	$ 31,978	($43,595)	($313,224)	($19,174)
Other Income	–	–	46,908	550,000	596,908
Net Profit	$ 305,667	$ 31,978	$ 3,313	$ 236,776	$ 577,734

Table H–7

Comparative Total Cost Projections
Total Base Management – Option 2

Appropriated Fund:	
Cost of Current Operations	$3,985,578
Cost of Contractor Projections	2,388,910
Savings to Government	$1,596,668
Flight-Line:	
Cost of Current Operations	$ 306,417
Cost of Contractor Projections	219,249
Savings to Government	$ 87,168
Hospital:	
Cost of Current Operations	$1,530,937
Cost of Contractor Projections	606,192
Savings to Government	924,745
AAFES:	
Government Profit, Current Operations	$ 189,133
MWR:	
Current Loss, Current Operations	($ 236,320)

Table H-8

Summary – Total Base Management - Option 3

	Appropriated Fund	Hospital	AAFES	MWR	Total
Sales	$4,099,271	$963,335	$1,331,623	$1,617,393	$8,011,622
Expenses:					
Food Cost	$1,466,706	388,975	541,831	640,934	3,038,446
Labor	1,366,729	382,414	572,716	725,458	3,047,317
Direct	309,952	28,061	101,100	320,697	759,810
Subtotal	$3,143,387	$799,450	$1,215,647	$1,787,089	$6,845,573
Utilities	185,000	39,972	6,224	50,000	281,196
Maintenance & Repairs	65,000	11,991	10,185	–	87,176
Government Contract Administration	50,000	–	20,000	16,000	86,000
Return to Government	204,963	39,972	66,581	77,733	389,249
Amortization	–	–	–	–	–
Subtotal	$3,648,350	$891,385	$1,318,637	$1,830,822	$7,689,194
Administrative Expense	204,963	39,972	66,581	67,619	379,135
Total Cost	$3,853,313	$931,357	$1,385,218	$1,898,441	$8,068,329
Profit/(Loss)	$ 245,958	$ 31,978	($ 53,595)	($ 281,048)	($ 56,707)
Other Income	–	–	46,908	460,000	506,908
Net Income	$ 245,958	$ 31,978	($ 6,687)	$ 178,952	$ 450,201

SUMMARY OF OPTION 3

This summary sheet illustrates the profitability of operating the food service at Travis AFB on a profit and loss basis without any renovations to the dining halls and without the creation of the Travesty and Pasquale's Tamale. In other words, the contractor would assume control of the base food service as it currently operates, but on a profit and loss basis.

Overall, Option 3 has lower sales. Gross sales for Option 3 are over one million dollars less than under the two previous options. As explained earlier, it was assumed that making no changes in the existing facilities will have a negative effect on drawing the additional customers reflected in Options 1 and 2 through higher sales. Projected meal counts for customers other than SIK personnel were reduced. This reduction is explained in Appendix D. Accordingly, the lower meal count resulted in a $30,000 reduction in direct expenses.

Observing the individual categories, the Appropriated Fund, the Hospital, and MWR all showed positive net income. AAFES, on the other hand resulted in a loss.

Table H–9

Comparative Total Cost Projections
Option 3

Appropriated Fund:	
Cost of Current Operations	$3,985,578
Cost of Contractor Projections	2,657,098
Savings to Government	$1,328,580
Flight-Line:	
Cost of Current Operations	$ 306,417
Cost of Contractor Projections	219,249
Savings to Government	$ 87,168
Hospital:	
Cost of Current Operations	$1,530,937
Cost of Contractor Projections	606,192
Savings to Government	$ 924,745
AAFES:	
Government Profit, Current Operations	$ 189,133
MWR:	
Current Loss, Current Operations	($ 236,320)

SENSITIVITY ANALYSIS OF CHANGES IN THE SIK ATTENDANCE RATE

OPTIONS ONE AND TWO

NARADCOM personnel performed a sensitivity analysis to determine the effects of changes in the attendance rate of enlisted SIK personnel on the total cost savings of various alternatives. The following derivation uses assumptions of new attendance rates in each alternative to determine the potential adverse effect of such changes. The actual calculations are based on ARA's assumptions concerning changes in the SIK cost per meal as the overall attendance varies.

Table H–10

Calculation of the Ratio of Increases (Decreases) in Fixed Costs to Increases (Decreases) in SIK Attendance

1. Total Cost = Fixed Cost + (Cost Per Meal) (Total Meals)

   Fixed Cost = Total Cost – (Cost Per Meal) (Total Meals)

2. Options 1 and 2

   Fixed Cost = 4,291,813 – (0.96) (1,757,808) = $2,604,317.4

3. Option 3

   Fixed Cost = 3,880,019 – (0.96) (1,428,752) = $2,508,417.1

4. In the ARA analysis, a 23% increase (calculated as (1,757,808 – 1,428,752)/1,428,752) in the total number of meals served results in a 4% increase (calculated as (2,604,317.4 – 2,508,417.1/2,508,417.1) in fixed costs. Therefore, NARADCOM personnel calculated the ratio between increases in fixed costs to increases in SIK attendance to be 0.17. NARADCOM personnel assumed this constant would remain constant in all similar analyses.

Table H–11

Sensitivity Analysis of Changes in the SIK Attendance Rate

Options 1 and 2

	NARADCOM Projected SIK Attendance Rate	Percent Increase in Attendance Rate Over Current 37.05% Level	Meals Served at 100% Attendance Rate Level	Projected SIK Meals at New Attendance Rate	Decrease In SIK Meals
1. [a]TEM	56%	50%	1,752,000	978,432	–
[b]AAFES	52%	40%	1,752,000	911,040	67,392
[c]DBM	50%	35%	1,752,000	876,000	102,432
[d]AP	46%	25%	1,752,000	805,920	172,512

	Projected SIK Attendance Rate	Percent Decrease in Attendance Rate
2. TBM	56	
AAFES	52	6.9%
DBM	50	10.5%
AP	46	17.6%

	Decrease in Meals Served	Percent Decrease in Meals Served (From 1,757,808)	Ratio of Fixed* Costs to Attendance Rate Changes	Percent Decrease in Fixed Costs	New Volume Percentage
3. AAFES	67,392	0.038	0.17	0.00646	99.354
DBM	102,432	0.058	0.17	0.00986	99.014
AP	172,512	0.098	0.17	0.01666	98.334

	New Total Volume	Fixed Cost	Fixed Cost Per Meal	Food Cost Per Meal	Total Cost Per Meal
4. AAFES	1,690,416	2,604,317(0.99354)=2,587,493	1.53	0.96	2.49
DBM	1,655,376	2,604,317(0.99014)=2,578,638	1.56	0.96	2.52
AP	1,585,296	2,604,317(0.98334)=2,560,929	1.62	0.96	2.58

	New SIK Volume	Total Cost	Flight Line**	Total Cost of SIK Reimbursement	Decrease in SIK Reimbursement Cost From The 56% Level
5. AAFES	911,040	2,268,490	219,249	2,487,739	120,420
DBM	876,000	2,207,520	219,249	2,426,769	181,390
AP	805,920	2,079,274	219,249	2,298,523	309,636

*Refer to Calculation of the Ratio of Increases in Fixed Costs to Increases in SIK Attendance.

**ARA assumed the Flight Line costs remained constant.

[a]Total Base Management
[b]AAFES Operation of Appropriated Fund Food Facilities
[c]Dual Base Management
[d]Commercial Profit/Loss Appropriated Fund Operations

Table H–11 (Cont'd)

Sensitivity Analysis of Changes in the SIK Attendance Rate

Options 1 & 2

	Sales Loss	Decreased Air Force Reimbursement	Lost Taxes*
6. AAFES	120,420	6,021	2878
DBM	181,390	9,070	4335
AP	309,636	15,482	7400

	Decreased SIK Reimbursement Cost	Decreased Savings Of Reimbursement To The Air Force	Decreased Taxes	Total Savings
7. AAFES	120,420	6021	2878	111,521
DBM	181,390	9070	4335	167,985
AP	309,636	15482	7400	286,754

*Based on the ARA assumptions that 17% of profits are required for corporate overhead and the remaining 83% is taxed at 48%. (The tax rate in 1978.)

Table H–12

Sensitivity Analysis of Changes in the SIK Attendance Rate

Option 3

	NARADCOM Projected SIK Attendance Rate	Percent Increase in Attendance Rate Over Current 37.05% Level	Meals Served at 100% Attendance Rate Level	Projected SIK Meals at New Attendance Rate	Decrease In SIK Meals
1. [a]TBM	56%	50%	1,752,000	978,432	–
[b]AAFES	52%	40%	1,752,000	911,040	67,392
[c]DBM	50%	35%	1,752,000	876,000	102,432
[d]AP	46%	25%	1,752,000	805,920	172,512

	Projected SIK Attendance Rate	Percent Decrease in Attendance Rate
2. TBM	56	
AAFES	52	6.9%
DBM	50	10.5%
AP	46	17.6%

	Decrease In Meals Served	Percent Decrease in Meals Served (From 1,757,808)	Ratio of Fixed* Costs to Attendance Rate Changes	Percent Decrease In Fixed Costs	New Volume Percentage
3. AAFES	67,392	0.038	0.17	0.00799	0.99201
DBM	102,432	0.038	0.17	0.01224	0.98776
AP	172,512	0.038	0.17	0.02057	0.97943

	New Total Volume	Fixed Cost	Fixed Cost Per Meal	Food Cost Per Meal	Total Cost Per Meal
4. AAFES	1,361,360	2,508,417(0.9920)=2,488,350	1.83	0.96	2.79
DBM	1,326,320	2,508,417(0.98776)=2,477,714	1.87	0.96	2.83
AP	1,256,240	2,508,417(0.97943)=2,456,819	1.96	0.96	2.92

	New SIK Volume	Total Cost	Flight Line**	Total Cost Of SIK Reimbursement	Decrease In SIK Reimbursement Cost From The 56% Level
5. AAFES	911,040	2,541,802	219,249	2,761,051	115,296
DBM	876,000	2,479,080	219,249	2,698,329	178,018
AP	805,920	2,353,286	219,249	2,572,535	303,812

*Refer to Calculation of the Ratio of Increases in Fixed Costs to Increases in SIK Attendance.

**ARA assumed the Flight Line costs remained constant.

[a]Total Base Management
[b]AAFES Operation of Appropriated Fund Food Facilities
[c]Dual Base Management
[d]Commercial Profit/Loss Appropriated Fund Operations

Table H–12 (Cont'd)

Sensitivity Analysis of Changes in the SIK Attendance Rate

Option 3

	Sales Loss	Decreased Air Force Reimbursement	Lost Taxes*
6. AAFES	115,296	5,765	2756
DBM	178,018	8,901	4255
AP	303,812	15,191	7261

	Decreased SIK Reimbursement Cost	Decreased Savings Of Reimbursement To The Air Force	Decreased Taxes	Total Savings
7. AAFES	115,296	5,765	2756	106,775
DBM	178,018	8,901	4255	164,862
AP	303,812	15,191	7261	231,360

*Based on the ARA assumptions that 17% of profits are required for corporate overhead and the remaining 83% is taxed at 48% (The tax rate in 1978).

APPENDIX I

APPENDIX I

COMMERCIAL PROFIT/LOSS OPERATION UNDER DUAL BASE MANAGEMENT

This appendix presents the details of the analysis performed by ARA Food Service Co., while under contract to NARADCOM, of a commercial firm operating on a profit/loss basis the Appropriated Fund, Hospital, and MWR base food services. The AAFES will retain control of its current food service operations thereby allowing two independent organizations to operate and manage food services on a base.

The assumptions made by ARA are essentially the same as those made under the Total Base Management System. The ARA projected profit/loss statements for each profit center are included. It should be noted that NARADCOM personnel included Pasquale's Tamale, a new facility, under the Appropriated Fund Profit Center and included the Travesty, a new facility, under the MWR profit center. NARADCOM personnel believed these two new facilities should be included under the Dual Base Management Concept. The inclusion of these two new facilities, recommended by ARA, do not change the individual facility profit/loss statements, but the overall totals for each profit center are increased to reflect the addition of these new facilities.

This appendix also includes a sensitivity analysis, developed by NARADCOM personnel, of increasing the attendance of SIK personnel and its effect on the overall cost savings of Dual Base Management.

Finally, a summary of the Dual Base Management overall cost savings based on the ARA analysis is presented for each option.

THE APPROPRIATED FUND PROFIT CENTER UNDER DUAL BASE MANAGEMENT

Attached are summary sheets for each of the three options under Dual Base Management. The financial projections presented reflect the same assumptions used in the respective options in Total Base Management. The only difference is that these projections reflect the absence of the AAFES sales. In each category, Appropriated Fund, MWR, and the Hospital, the figures are the same indicating the decision of the ARA Study Team not to treat AAFES as a significant competitor. Even if it could be logically assumed that AAFES would be a competitor, attempting to guess what the extent of that competiton would at best be hazardous and have little or no value for future analysis. This is particularly true since all of the numbers presented throughout this profit and loss study are built on assumptions, the basis of which were left entirely to the judgement of the ARA Study Team.

DUAL BASE MANAGEMENT – OPTION 1

The attached Profit and Loss Statement depicts the projected operating results for the Appropriated Fund locations (except hospital) with amortization cost for renovation of the three Dining Halls and Pasquale's Tamale included.

To make this a viable projection, the a la carte prices would increase five to six percent which would move the prices out of competitive price ranges.

In the basic assumption, a 5% return on sales to the government was assumed. However, with the increased expense of amortization, it was reduced to 1% of sales.

Also included are flat charges for utilities, maintenance and repair, and government contract administration.

Table I–1

Operating Statement
Appropriated Fund – Option 1

	Troop	In-Flight	Total
Sales	$4,291,813	$219,249	$4,511,062
Food	1,687,506	95,104	1,782,610
Labor	1,301,523	65,206	1,366,729
Direct	332,344	7,608	339,952
	$3,321,373	$167,918	$3,489,291
Utilities	174,038	10,962	185,000
Maintenance	61,712	3,288	65,000
Gov't. Contract Administration	48,000	2,000	50,000
Return To Government	42,918	2,193	45,111
Amortization	583,294	–	583,294
	$4,231,335	$186,361	$4,417,696
Admin. Exp.	214,590	10,962	225,552
	$4,445,925	$197,323	$4,643,248
Profit/(Loss)	(154,112)	21,926	($132,186)

Cost Per Meal: $4,448,920 ÷ 1,757,808 = $2.5309

Cost Per Day: $2.5309 x 3 = $7.5927

Food Cost Per Meal: $0.96

Assumed BDFA $3.00 (computed in normal manner on A.F. #200)

Table I–2

Pasquale's Tamale – Option 1

		%		%
Sales			$200,000	100.0
Food/Product Cost	$66,000			
Labor Cost	50,000			
Utilities	4,000			
Direct Cost	20,000			
*Amortization	14,826			
Administrative	10,000			
Gov't. Contract Admin.	5,000			
Return to Government	2,000			
Total Costs			171,826	
Profit or (Loss)			$ 28,174	
Other Income			–	
Total Profit or (Loss)			$ 28,174	

*Investment of $105,902 for ten years.

Table I–3

Summary – Dual Base Management – Appropriated Fund
Profit Center Option 1

	Appropriated Fund	Pasquale's Tamale	Totals
Sales	$4,511,062	$200,000	$4,711,062
Food Cost	$1,782,610	$ 66,000	$1,848,610
Labor Cost	1,366,729	50,000	1,416,729
Direct Cost	339,952	20,000	359,952
Subtotal	$3,489,291	$136,000	$3,625,291
Utilities	185,000	4,000	189,000
Maintenance & Repair	65,000	0	65,000
Gov't. Contract Administration	50,000	5,000	55,000
Return to Government	45,111	2,000	47,111
Amortization	583,294	14,826	598,120
Subtotal	$4,417,696	$161,826	$4,579,522
Administrative Expense	225,552	10,000	235,552
Total Cost	$4,643,248	$171,826	$4,815,074
Profit/(Loss)	($ 132,186)	$ 28,174	($ 104,012)
Other Income	–	–	–
Net Profit/(Loss)	($ 132,186)	$ 28,174	($ 104,012)

DUAL BASE MANAGEMENT – OPTION 2

The attached Profit and Loss Statement depicts the projected operating results for the Appropriated Fund locations (except hospital) without amortization charge for renovation included as such costs will be borne by government. Since the amortization charge is not included, the return to the government is 5%, as stated in basic assumptions.

However, flat charges are included for utilities, maintenance and repair and government contract administration.

Basis for determining number of meals for food cost purposes is detailed in Appropriated Fund Meal Projections for Options 1 and 2 (Appendix D).

Table I–4

Operating Statement
Appropriated Fund – Option 2

	Troop	In-Flight	Total
Sales	$4,291,813	$219,249	$,511,062
Food	$1,687,506	$ 95,104	$1,782,610
Labor	1,301,523	65,206	1,366,729
	332,344	7,608	339,952
	$3,321,373	$167,918	$3,489,291
Utilities	174,038*	10,962	185,000
Maintenance	61,712*	3,288	65,000
Gov't. Cont. Administration	48,000*	2,000	50,000
Return to Government 5%	214,590	10,962	225,552
	$3,819,713	$195,130	$4,014,843
Administrative Expense 5%	214,590	10,962	225,552
	$4,034,303	$206,092	$4,240,395
Profit	$ 257,510	$ 13,157	$ 270,667

Cost Per Meal: 4,291,813 ÷ 1,757,808 = $2.44157

Cost Per Day: 2.44157 x 3 = $7.32471

Food Cost: $0.96

Assumed BDFA $3.00 (computed in normal manner on A.F. 200)

$3.00 ÷ .39319 = 7.6298 S.I.K. Ration

Reimbursement Cost

Table I–5

Pasquale's Tamale – Option 2

Sales	$200,000
Product/Food Cost	$ 66,000
Labor Cost	50,000
Utilities	4,000
Direct Cost	20,000
Administration	10,000
Gov't. Contract Admin.	5,000
Return to Government	10,000
Total Cost	$165,000
Profit or (Loss)	$ 35,000
Other Income	–
Total Profit or (Loss)	$ 35,000

Table I–6

Summary – Dual Base Management Appropriated Fund
Profit Center – Option 2

	Appropriated Fund	Pasquale's Tamale	Totals
Sales	$4,511,062	$200,000	$4,711,062
Food Cost	$1,782,610	$ 66,000	$1,848,610
Labor Cost	1,366,729	50,000	1,416,729
Direct Cost	339,952	20,000	359,952
Subtotal	$3,489,291	$136,000	$3,625,291
Utilities	185,000	4,000	189,000
Maintenance & Repair	65,000	0	65,000
Gov't. Contract Administration	50,000	5,000	55,000
Return to Government	225,552	10,000	235,552
Amortization	–	–	–
Subtotal	$4,014,843	$155,000	$4,169,843
Administrative Expense	225,552	10,000	235,552
Total Cost	$4,240,395	$165,000	$4,405,395
Profit/(Loss)	$ 270,667	$ 35,000	$ 305,667
Other Income	–	–	–
Net Profit	$ 270,667	$ 35,000	$ 305,667

DUAL BASE MANAGEMENT – OPTION 3

The attached Profit and Loss Statement depicts the projected operating results for the Appropriated Fund locations (except hospital), but including Pasquale's Tamale, without amortization charge for renovation. Under this option, no extensive renovations will be undertaken in the Dining Halls. Return of 5% of sales to the government is included.

Flat charges are included for utilities, maintenance and repair, and government contract administration. The basis for determining number of meals for food cost purposes is detailed on Appropriated Fund Meal Projections for Option Three.

Because of the lower projected number of meals, a small reduction was made in Direct Expense.

Table I–7

Summary Dual Base Management -- The Appropriated Fund
Profit Center – Option 3

	Troop	In-Flight	Total
Sales	$3,880,022	$219,249	$4,099,271
Food	$1,371,602	95,104	1,466,706
Labor	1,301,523	65,206	1,366,729
Direct	302,344	7,608	309,952
	$2,975,469	$167,918	$3,143,387
Utilities	174,038	10,962	185,000
Maintenance	61,712	3,288	65,000
Gov't. Cont. Administration	48,000	2,000	50,000
Return to Gov't.	194,001	10,962	204,963
	$2,453,220	$195,130	$3,648,350
Admin. Expense	194,001	10,962	204,963
	$3,647,221	$206,092	$3,853,313
Profit	$ 232,801	$ 13,157	$ 245,958

Cost Per Meal: $3,880,022 – $1,428,752 = $2.71567

Cost Per Day: $2.71567 x 3 = $8.14701

Food Cost: $0.96 per meal

SIK Reimbursement: Assumed BDFA – $3.00 (computed in normal manner)

$3.00 -- $0.36 = $8.3333 per weighted ration

THE MWR PROFIT CENTER UNDER DUAL BASE MANAGEMENT

The following Profit and Loss Statement depicts the projected operating results of commercial operation of the MWR facilities at the test site, Travis AFB.

Table I–8

Officers Open Mess Option 1
Profit/Loss Statement

Sales	$ 740,000	74.0%
Other Income	260,000	26.0
Total Income	$1,000,000	100.0%
Cost of Sales	$ 296,000	40.0%
Total Payroll	392,200	53.0
Direct Expenses	133,200	18.0
Utilities and Miscellaneous	25,000	3.4
Commission Paid to Government	2,603	
Government Controlled Administrative Cost	6,000	.8
Administrative Overhead	37,000	5.0
Amortization	34,057	4.6
Total Expenses	$ 926,060	
Profit	$ 73,940	10.0%

Table I–9

NCO Club

Option 1

Profit/Loss Statement

Sales	$ 976,259	78.0%
Other Income	275,000	22.0
Total Income	$1,251,259	100.0%
Cost of Sales	$ 401,242	41.1%
Total Payroll	415,886	42.6
Direct Expenses	205,014	21.0
Utilities and Miscellaneous	25,000	2.6
Commission Paid to Government	23,977	2.5
Government Controlled Administrative Cost	6,000	.6
Administrative Overhead	48,813	5.0
Amortization	27,701	2.8
Total Expenses	$1,153,633	
Profit	$ 97,626	10.0

Table I–10

Bowling Alley Snack Bar – Option 1
Profit/Loss Statement

Sales	$265,000	
Cost of Sales	90,100	34.0%
Labor Cost	66,250	25.0
Direct Expenses	15,900	6.0
Government Controlled Administrative Cost	4,000	1.5
Government's Commission	45,000	17.0
Total Expenses	$221.250	
Profit	$ 43,750	16.5

No contractor administrative costs are included. This operation will be supervised out of the overhead from the NCO and Officers' Clubs.

Table I–11

Travesty – Option 1
Profit/Loss Statement

		%		%
Sales			$180,000	100.0
Food/Product Cost	$71,760	36.8		
Labor Cost	62,220	31.9		
Utilities	3,600	2.0		
Direct Cost	12,960	7.2		
*Amortization	58,100	32.3		
Administrative	9,000	5.0		
Return to Government	1,800	1.0		
Total Costs			219,440	121.9
Profit or (Loss)			($ 39,440)	(21.9)
Other Income			15,000	8.3
Total Profit or (Loss)			($ 24,440)	(13.6)

*$415,000 over ten-year period

Table I–12

Officers Open Mess – Option 2
Profit/Loss Statement

Sales	$ 740,000	74.0%
Other Income	260,000	26.0
Total Income	$1,000,000	100.0%
Cost of Sales	$ 296,000	40.0%
Total Payroll	392,200	53.0
Direct Expenses	133,200	18.0
Utilities and Miscellaneous	25,000	3.4
Commission Paid to Government	2,603	
Government Controlled Administrative Cost	6,000	.8
Administrative Overhead	37,000	5.0
Amortization	34,057	4.6
Total Expenses	$ 926,060	
Profit	$ 73,940	10.0%

Table I–13

NCO Club – Option 2
Profit/Loss Statement

Sales	$ 976,259	78.0%
Other Income	275,000	22.0
Total Income	$1,251,259	100.0%
Cost of Sales	$ 401,242	41.1%
Total Payroll	415,886	42.6
Direct Expenses	205,014	21.0
Utilities and Miscellaneous	25,000	2.6
Commission Paid to Government	23,977	2.5
Government Controlled Administrative Cost	6,000	.6
Administrative Overhead	48,813	5.0
Amortization	27,701	2.8
Total Expenses	$1,153,633	
Profit	$ 97,626	10.0

Table I–14

Bowling Alley Snack Bar – Option 2
Profit/Loss Statement

Sales	$265,000	
Cost of Sales	90,100	34.0%
Labor Cost	66,250	25.0
Direct Expenses	15,000	6.0
Government Controlled Administrative Cost	4,000	1.5
Government's Commission	45,000	17.0
Total Expenses	$221,250	
Profit	$ 43,750	16.5

No contractor administrative costs are included. This operation will be supervised out of the overhead from the NCO and Officers' Clubs.

Table I–15

Travesty – Option 2
Profit/Loss Statement

		%
Sales	$180,000	100.0
Food/Product Cost	$ 71,760	36.8
Labor Cost	62,220	31.9
Utilities	3,600	2.0
Direct Cost	12,960	7.2
Administrative	9,000	5.0
Return to Government	9,000	5.0
Total Costs	$168,540	93.6
Profit or (Loss)	$ 11,460	6.4
Other Income	15,000	7.7
Total Profit or (Loss)	$ 26,460	14.7

Table I–16

Officers Open Mess – Option 3
Profit/Loss Statement

		%
Sales	$538,844	72.0
Other Income	210,000	28.0
Total Income	$748,844	100.0
Cost of Sales	$216,465	40.1
Total Payroll	296,365	55.0
Direct Expenses	112,779	21.0
Utilities and Miscellaneous	25,000	4.6
Commission Paid to Government	11,409	2.0
Government Controlled Administrative Cost	6,000	1.1
Administrative Overhead	26,942	5.0
Total Expenses	$694,960	
Profit	$ 53,884	10.0

Table I—17

NCO Club – Option 3
Profit/Loss Statement

		%
Sales	$ 813,549	76.5
Other Income	250,000	23.5
Total Income	$1,063,549	100.0
Cost of Sales	$ 334,369	41.1
Total Payroll	362,843	44.6
Direct Expenses	192,018	23.6
Utilities and Miscellaneous	25,000	3.0
Commission Paid to Government	21,324	2.6
Government Controlled Administrative Cost	6,000	
Administrative Overhead	40,677	5.0
Total Expenses	$ 982,231	
Profit	$ 81,318	10.0

Table I–18

Option 3

Bowling Alley Snack Bar
Operating Statement

		%
Sales	$265,000	
Cost of Sales	$ 90,100	34.0
Labor Cost	66,250	25.0
Direct Expenses	15,900	6.0
Government Controlled Administrative Cost	4,000	1.5
Government's Commission	45,000	17.0
Total Expenses	$221,250	
Profit	$ 43,750	16.5

No administrative costs are included. This operation will be supervised out of the overhead from the NCO and Officers Clubs.

Derivation of the Projected Change in Costs Resulting From Changes In SIK Attendance Under Dual Base Management

1. ARA assumed that under options 1 and 2 the annual volume of base personnel would be as follows:

Personnel	Annual Volume
Enlisted – BAS	718,536
Officers	8,996
Civilians	51,844
Subtotal	779,376
Enlisted – SIK (at the NARADCOM projected attendance rate level of 50%)	876,000*
Total	1,655,376

	Percent Increase In SIK Attendance	SIK Volume At The 50% Level	Increase In SIK Volume	Total Volume Before Increases	Percent Increase In Total Volume
2.	10	876,000	87,600	1,655,376	5.3
	20	876,000	175,200	1,655,376	10.6
	30	876,000	262,800	1,655,376	15.9

	Percent Increase In SIK Attendance	Percent Increase In Total Meals Served	Ratio Of Fixed** Costs To Attendance Rate Changes	Percent Increase In Fixed Costs
3.	10	5.3	0.17	0.901
	20	10.6	0.17	1.802
	30	15.9	0.17	2.703

	Percent Increase In SIK Attendance	New Total Volume	Fixed Costs	Ratio Of Additional Fixed Costs	New Fixed Costs	Fixed Cost Per Meal
4.	10	1,742,976	2,578,638	1.00901	2,601,872	1.49
	20	1,830,576	2,578,638	1.01802	2,625,105	1.43
	30	1,918,176	2,578,638	1.02703	2,648,339	1.38

*Refer to Sensitivity Analysis of Changes in the SIK Attendance Rate. Options 1 and 2.

**Refer to Calculation of the Ratio of Increases in Fixed Costs to Increases in SIK Attendance.

	Percent Increase In SIK Attendance	Fixed Cost Per Meal	Food Cost Per Meal	Total Cost Per Meal
5.	10	1.49	0.96	2.45
	20	1.43	0.96	2.39
	30	1.38	0.96	2.34

	Percent Increase In SIK Attendance	New SIK Volume	Cost/Meal	Total Cost	Flight Line	Total Cost Of Options 1 and 2
6.	10	963,600	2.45	2,360,820	219,249	2,580,069
	20	1,051,200	2.39	2,512,368	219,249	2,731,617
	30	1,138,800	2.34	2,664,792	219,249	2,884,041

7. Savings at the 50% attendance rate level increase from savings at the 56% attendance rate level by $167,985. (Refer to Sensitivity Analysis of Changes in the SIK Attendance Rate.)

Total Savings = Savings at the 56% SIK Attendance Rate Level + The Increase In Savings

a. Total Savings (Option 1) = 2,978,703 + 167,985 = 3,146,688

b. Total Savings (Option 2) = 2,755,693 + 167,985 = 2,923,678

8. SIK Meal Cost Increase

Percent Increase In SIK Attendance	Total Meal Cost At New Attendance Rate Level	Total Meal Cost At Old Attendance Rate Level*	Increased Costs Of Increased SIK Attendance
10	2,580,069	2,426,769	153,300
20	2,731,716	2,426,769	304,848
30	2,884,041	2,426,769	457,272

*Refer to Sensitivity Analysis of Changes in the SIK Attendance Rate.

APPENDIX J

APPENDIX J

COMMERCIAL PROFIT/LOSS OPERATION OF THE APPROPRIATED FUND FOOD SERVICE SYSTEM

This appendix presents the analysis performed by ARA Food Services Co., while under contract to NARADCOM, of a commercial firm operating on a profit/loss basis the entire Appropriated Fund food service system. The AAFES, MWR, and Hospital will retain control of their current food service operations.

The assumptions made by ARA are essentially the same as those made under the Total Base Management System. The Hospital is not included in this analysis, but Pasquale's Tamale a new fast food facility, is created under options 1 and 2. The ARA projected profit/loss statements for the Appropriated Fund system and Pasquale's Tamale are included.

This appendix also includes a sensitivity analysis, developed by NARADCOM personnel and its effect on the overall cost savings of commercial operation of the Appropriated Fund Food Services.

COMMERCIAL OPERATION OF APPROPRIATED FUND FOOD SERVICES – OPTION 1

The attached Profit/Loss Statement depicts the projected operating results for the Appropriated Fund locations (except Hospital) with amortization cost for renovation of the three Dining Halls and Pasquale's Tamale included.

To make this a viable projection, the a la carte prices would increase five to six percent which would move the prices out of competitive price ranges.

In our own basic assumption, it was assumed to return 5% of sales to the government. However, with the increased expense of amortization, it was reduced to 1% of sales.

Also included are flat charges for utilities, maintenance and repair, and government contract administration.

Pasquale's Tamale is a new creation. It will be a fast food restaurant which featu[illegible] home style pizza and Mexican food. Because Pasquale's is a completely new op[illegible]or[illegible] number of operational assumptions had to be made, particularly with regard to sales [illegible]direct cost. Under Option 1, total sales are estimated at $200,000 per year with a net profit to the contractor of $28,174. As has been the case throughout the study, in Option 1 the contractor made the investment of $105,902 which will be amortized over a ten-year period. The government received a return of one percent on gross sales as commission. By comparison, in Option 2 net profit rose by 3.4% after returning a 5% commission to the government. The government's commission increased because the contractor did not have to make the capital improvements.

In all three options, the Appropriated Fund figures approximate the same dollar amounts as in the two previous commercial operation alternatives.

Table J–1

Operating Statement
Appropriated Fund – Option 1

	Troop	In-Flight	Total
Sales	$4,291,813	$219,249	$4,511,062
Food	$1,687,506	$ 95,104	$1,782,610
Labor	1,301,523	65,206	1,366,729
Direct	332,344	7,608	339,952
	$3,321,373	$167,918	$3,489,291
Utilities	174,038	10,962	185,000
Maintenance	61,712	3,288	65,000
Gov't Cont. Admin.	48,000	2,000	50,000
Return to Gov't.	42,918	2,193	45,111
Amortization Expense	583,294	–	583,294
	$4,231,335	$186,361	$4,417,696
Admin. Exp.	214,590	10,962	225,552
	$4,445,925	$197,323	$4,643,248
Profit/(Loss)	($ 154,112)	$ 21,926	($ 132,186)

Cost Per Meal: 4,448,920 ÷ 1,757,808 = 2.5309

Cost Per Day: 2.5309 x 3 = 7.5927

Food Cost Per Meal: $0.96

Assumed BDFA $3.00 (computed in normal manner on A.F. #200)

$3.00 – 0.39319 = 7.6298 SIK Ration Reimbursement Cost

Table J–2

Pasquale's Tamale – Option 1

			%
Sales		$200,000	100.0
Food/Product Cost	$66,000		
Labor Cost	50,000		
Utilities	4,000		
Direct Cost	20,000		
*Amortization	14,826		
Administrative	10,000		
Gov't. Contract Admin	5,000		
Return to Government	2,000		
Total Costs		171,826	
Profit or (Loss)		$ 28,174	
Other Income		–	
Total Profit or (Loss)		$ 28,174	

*Investment of $105,902 for ten years.

Table J–3

Summary – Commercial Appropriated Fund Operations – Option 1

	Appropriated Fund	Pasquale's Tamale	Total
Sales	$4,511,062	$200,000	$4,711,062
Food Cost	1,782,610	66,000	1,848,610
Labor Cost	1,366,729	50,000	1,416,729
Direct Cost	339,952	20,000	359,952
Subtotal	$3,489,291	$136,000	$3,625,291
Utilities	185,000	4,000	189,000
Maintenance & Repair	65,000	0	65,000
Gov't Contract Administration	50,000	5,000	55,000
Return to Government	45,111	2,000	47,111
Amortization	583,294	14,826	598,120
Subtotal	$4,417,696	$161,826	$4,579,522
Administrative Expense	225,552	10,000	235,552
Total Cost	$4,643,248	$171,826	$4,815,074
Profit/(Loss)	($132,186)	28,174	($104,012)
Other Income	–	–	–
Net Profit/(Loss)	($132,186)	$ 28,174	($104,012)

COMMERCIAL APPROPRIATED FUND OPERATIONS – OPTION 2

The attached Profit and Loss Statement depicts the projected operating results for the Appropriated Fund locations (except Hospital) without amortization charge for renovation included as such costs will be borne by government. Since the amortization charge is not included, the return to the government is 5%, as stated in the basic assumptions.

However, flat charges are included for utilities, maintenance, and repair, and government contract administration. The basis for determining number of meals for food cost purposes is detailed on Appropriated Fund Meal Projections for Options 1 and 2.

Table J–4

Operating Statement
Appropriated Fund – Option 2

	Troop	In-Flight	Total
Sales	$4,291,813	$219,249	$4,511,062
Food	$1,687,506	$ 95,104	$1,782,610
Labor	1,301,523	65,206	1,366,729
	332,344	7,608	339,952
	$3,321,373	$167,918	$3,489,291
Utilities	174,038*	10,962	185,000
Maintenance	61,712*	3,288	65,000
Gov't. Cont. Administration	48,000*	2,000	50,000
Return to Government 5%	214,590	10,962	225,552
	$3,819,713	$195,130	$4,014,843
Administrative Expense 5%	214,590	10,962	225,552
	$4,034,303	$206,092	$4,240,395
Profit	$ 257,510	$ 13,157	$ 270,667

Cost Per Meal: 4,291,813 ÷ 1,757,808 = $2.44157

Cost Per Day: 2.44157 x 3 = $7.32471

Food Cost: $0.96

Assumed BDFA $3.00 (computed in normal manner on A.F. 200)

$3.00 – 0.39319 = 7.6298 SIK Ration

Reimbursement Cost

Table J–5

Pasquale's Tamale – Option 2

Sales	$200,000
Product/Food Cost	$ 66,000
Labor Cost	50,000
Utilities	4,000
Direct Cost	20,000
Administration	10,000
Gov't. Contract Admin.	5,000
Return to Government	10,000
Total Cost	$165,000
Profit or (Loss)	$ 35,000
Other Income	–
Total Profit or (Loss)	$ 35,000

Table J–6

Summary – Commercial Appropriated Fund Operations – Option 2

	Appropriated Funds	Pasquale's Tamale	Total
Sales	$4,511,062	$200,000	$4,711,062
Food Cost	$1,782,610	66,000	1,848,610
Labor Cost	1,366,729	50,000	1,416,729
Direct Cost	339,952	20,000	359,952
Subtotal	$3,489,291	$136,000	$3,625,291
Utilities	185,000	4,000	189,000
Maintenance & Repair	65,000	0	65,000
Gov't. Contract Administration	50,000	5,000	55,000
Return to Government	225,552	10,000	235,552
Amortization	–	–	–
Subtotal	$4,014,843	$155,000	$4,169,843
Administrative Expense	225,552	10,000	235,552
Total Cost	$4,240,395	$ 35,000	$4,405,395
Profit/(Loss)	$ 270,667	35,000	305,667
Other Income	–	–	–
Net Profit	$ 270,667	$ 35,000	$ 305,667

COMMERCIAL APPROPRIATED FUND OPERATIONS – OPTION 3

The accompanying Profit and Loss Statement illustrates the projected operating results for the Appropriated Fund locations (except Hospital) without amortization charge for renovation. Under this operation, no extensive renovations will be undertaken in the Dining Halls. Return of 5% of sales to the government is included.

Flat charges are included for utilities, maintenance and repair, and government contract administration.

Because of the lower projected number of meals, a small reduction was made in direct expense.

The basis for determining the number of meals for food cost purposes is detailed in Appropriated Fund Meal Projections for Option Three.

Table J–7

Operating Statement
Appropriated Fund -- Option 3

	Troop	In-Flight	Total
Sales	$3,880,022	$219,249	$4,099,271
Food	$1,371,602	95,104	1,466,706
Labor	1,301,523	65,206	1,366,729
Direct	302,344	7,608	309,952
	$2,975,469	$167,918	$3,143,387
Utilities	174,038	10,962	185,000
Maintenance	61,712	3,288	65,000
Gov't. Cont. Administration	48,000	2,000	50,000
Return to Gov't.	194,001	10,962	204,960
	$2,453,220	$195,130	$3,648,350
Admin. Expense	194,001	10,962	204,963
	$3,647,221	$206,092	$3,853,313
Profit	$ 232,801	$ 13,157	$ 245,958

Cost Per Meal: $3,880,022 ÷ $1,428,752 = $2.71567

Cost Per Day: $2.71567 x 3 = $8.14701

Food Cost: $0.96 per meal

SIK Reimbursement: Assumed BDFA — $3.00 (computed in normal manner)

$3.00 ÷ $0.36 = $8.3333 per weighted ration

Table J--8

Summary -- Commercial Appropriated Fund
Operations -- Option 3

	Appropriated Fund
Sales	$4,099,271
Food Cost	$1,466,706
Labor	1,366,729
Direct Expense	309,952
Subtotal	$3,143,387
Utilities	185,000
Maintenance & Repairs	65,000
Government Contract Administration	50,000
Return to Government	204,963
Amortization	--
Subtotal	$3,648,350
Administrative Expense	204,963
Total Cost	$3,853,313
Profit/(Loss)	$ 245,958
Other Income	--
Net Profit	$ 245,958

Table J–9

Derivation of the Projected Change in Costs Resulting From Changes In SIK Attendance Under Commercial P/L Appropriated Fund Operations

1. ARA assumed that under options 1 and 2 the annual volume of base personnel would be as follows:

Personnel	Annual Volume
Enlisted – BAS	718,536
Officers	8,996
Civilians	51,844
Subtotal	779,376
Enlisted – SIK (at the NARADCOM projected attendance rate level of 46%)	805,920*
Total	1,585,296

	Percent Increase In SIK Attendance	SIK Volume At The 50% Level	Increase In SIK Volume	Total Volume Before Increases	Percent Increase In Total Volume
2.	10	805,920	80,592	1,585,296	5.1
	20	805,920	161,184	1,585,296	10.2
	30	805,920	241,776	1,585,296	15.3

	Percent Increase In SIK Attendance	Percent Increase In Total Meals Served	Ratio of Fixed** Costs To Attendance Rate Changes	Percent Increase In Fixed Costs
3.	10	5.1	0.17	0.867
	20	10.2	0.17	1.734
	30	15.3	0.17	2.601

	Percent Increase In SIK Attendance	New Total Volume	Fixed Costs	Ratio Of Additional Fixed Costs	New Fixed Costs	Fixed Cost Per Meal
4.	10	1,665,888	2,560,929	1.00867	2,583,132	1.55
	20	1,746,480	2,560,929	1.01734	2,605,336	1.49
	30	1,827,072	2,560,929	1.02601	2,627,539	1.44

*Refer to Sensitivity Analysis of Changes in the SIK Attendance Rate. Options 1 and 2.

**Refer to Calculation of the Ratio of Increases in Fixed Costs to Increases in SIK Attendance.

	Percent Increase In SIK Attendance	Fixed Cost Per Meal	Food Cost Per Meal	Total Cost Per Meal
5.	10	1.55	0.96	2.51
	20	1.49	0.96	2.45
	30	1.44	0.96	2.40

	Percent Increase In SIK Attendance	New SIK Volume	Cost/Meal	Total Cost	Flight Line	Total Cost Of Options 1 and 2
6.	10	886,512	2.51	2,225,145	219,249	2,444,394
	20	967,104	2.45	2,369,405	219,249	2,588,654
	30	1,047,696	2.40	2,514,470	219,249	2,733,719

7. Savings at the 46% attendance rate level will increase from savings at the 56% attendance rate level by $286,754. (Refer to Sensitivity Analysis of Changes in the Attendance Rate.)

a. Total Savings = Savings at the 56% SIK attendance rate level + the increase in savings from a lower (46%) attendance rate level.

b. Total Savings (Option 1) = $1,628,421 + 286,754 = 1,915,175

c. Total Savings (Option 2) = $1,441,947 + 286,754 = 1,728,701

8. *SIK Meal Cost Increase*

Percent Increase In SIK Attendance	Total Meal Cost At New Attendance Rate Level	Total Meal Cost At Old Attendance Rate Level*	Increased Costs Of Increased SIK Attendance
10	2,444,394	2,298,523	145,871
20	2,588,654	2,298,523	290,131
30	2,733,719	2,298,523	435,196

*Refer to Sensivitity Analysis of Changes in the SIK Attendance Rate.

APPENDIX K

APPENDIX K

AAFES PROFIT/LOSS OPERATION OF THE APPROPRIATED FUND FOOD SERVICE SYSTEM

This appendix provides a derivation, generated by NARADCOM personnel, of the cost of meals served to enlisted SIK personnel when AAFES operates the Appropriated Fund food service system on a profit/loss basis. The derivation is based on analysis of a commercial firm's operation, on a profit/loss basis, of the Appropriated Fund Food Service System performed by ARA Food Services Co., at the test site. Further, the profits of AAFES operation of the Appropriated Fund Food Service System are estimated based on current AAFES food facility direct operating profit goals in the Golden Gate Region in which the test site is located.

DERIVATION OF SIK REIMBURSEMENT COSTS AND AAFES PROFITS UNDER AAFES OPERATION OF APPROPRIATED FUND FOOD SERVICES

1. The total reimbursement cost for SIK meals under AAFES operation of Appropriated Fund Food Service (at the NARADCOM projected attendance rate level of 52%) is $2,761,051. (Refer to the Sensitivity Analysis of changes in the SIK Attendance Rate – Option 3, Appendix H, for the derivation of this figure.) In this alternative, Option 3 is selected since no facility construction or renovation is planned.

2. The SIK Reimbursement Cost figure of $2,761,051 includes an anticipated profit goal of 6% assumed by ARA Food Services Co.

3. Contacts with the AAFES Headquarters reveals that in the Golden Gate Region, in which the test site (Travis AFB) is located, the average Direct Operating Profit for food operations is 6.74%.

4. NARADCOM personnel projected the total SIK Reimbursement Cost for AAFES food operations by the following method:

a. Contractor Cost of Meals = Total Reimbursement Cost – ARA Projected 6% Profit Goal

$$2{,}595{,}388 = 2{,}761{,}051 - (0.06)\ (2{,}761{,}051)$$

b. Assume the Contractor cost of meals equals the AAFES cost of meals.

c. Then, the reimbursement to AAFES for SIK meals will be the cost of the meals 2,595,388 plus the 6.74% direct operating profit goal in the AAFES Golden Gate Region. The calculation is as follows:

$$\$2{,}595{,}388 \div (1 - 0.0674) = 2{,}782{,}959$$

The total SIK reimbursement cost under AAFES operation is, therefore, projected to be $2,782,959.

5. Contacts with the AAFES Headquarters also revealed that the average contribution to the Welfare Fund for food operations in the Golden Gate Region was 2.16%. This is 32% (2.16/6.74) of the total direct operating profit. Ordinarily 32% of the direct operating profit, $60,112, would be provided to the welfare fund and the remaining $127,459 would be required for AAFES Regional and Headquarters staffs and other overhead expenses.

APPENDIX L

APPENDIX L

ANALYSIS OF BASE PERSONNEL ATTENDANCE UNDER A BAS A LA CARTE SYSTEM AT THE TEST SITE, TRAVIS AIR FORCE BASE

This appendix presents the projected changes in attendance by enlisted BAS and SIK base personnel of the Appropri[illegible]d Fund facilities under a BAS A La Carte system. The attendance projections for each perso[illegible]nel category at the test site, Travis AFB, are presented based on a similar BAS A La Carte test at NAS Alameda. Finally, the overall annual weighted rations projected under BAS A La Carte at the test site are presented.

A cost analysis of implementation of an A La Carte system on an Air Force Base (Travis AFB) has been performed to indicate its feasibility in a military setting in comparison to the other alternatives under investigation. The analysis uses assumptions based on a NARADCOM test of an A La Carte operation at NAS Alameda from 1 March 1976 through 31 August 1976.

The populations and operating characteristics of NAS Alameda and Travis AFB are presented in Table L–1, to provide a comparison of the two military installations. As shown, Travis AFB is a much larger installation with five food outlets serving 526,607 rations annually (data collected during Phase I of USAF 7–1) compared to NAS Alameda with one food outlet serving 115,979 rations annually. There are some differences in the military population since, at Travis AFB 19.2% of the enlisted personnel subsist on SIK, while at NAS Alameda only 6.6% subsist on RIK. In the Navy RIK (Rations in Kind) is the equivalent of BAS. The following analysis is based on the assumption that the changes in attendance rates at NAS Alameda, due to the all BAS a la carte systems, will be the same for similar sub-populations at Travis AFB.

Table L–1

Military Populations and Characteristics of NAS, Alameda and Travis AFB

	NAS, Alameda		Travis AFB	
Military Population	No	%	No	%
SIK or RIK	245	6.6	1568	19.2
BAS or COMRATS	3485	93.4	6596	80.8
Total	3730	100.0	8165	100.0

Total Weight Rations	Before	After*	CY 76
Served Per Year	115,979	106,237	526,607
No. of food outlets	1	1	5
Messmen contract	No Changes		No Changes

*No. of weighted rations served under the BAS A LA CARTE system.

It is important to note the changes in the attendance rates of the various sub-populations after the all BAS system was instituted at NAS Alameda.

The attendance rates at NAS Alameda were calculated by dividing the actual daily attendance or headcount by the number of man meals that were available. The number of man meals available is equal to the number of personnel present for duty and allowed to eat in the facility times the number of meals offered per day.

The fractional changes in the attendance rates, shown in Table L–2, at NAS Alameda were used to calculate the projected attendance at Travis AFB for the BAS A LA CARTE system. The fractional change is defined as the fraction that when multiplied by the attendance rate before the test equals the attendance rate after the test. The projected attendance at Travis AFB using these fractional changes is presented in Table L–3.

Table L–2

Attendance Rates at NAS Alameda For The All BAS System

Sub-Population	(No.)	Attendance Rates Before	Attendance Rates After	Fractional Change
RIK	(245)	22.95%	7.30%	Down to 0.3181
COMRATS-M	(1313)	1.02%	2.72%	Up 2.6666
COMRATS-S	(419)	5.82%	7.59%	Up 1.3041
COMRATS (Overall)	(1732)	2.18%	3.90%	Up 1.7872

Table L–3

Travis AFB Proposed BAS A La Carte System

	Conventional	BAS A La Carte	
	Annual Weighted Rations At TAFB	Change At NAS Alameda	Projected TAFB Weighted Rations
RIK/SIK	370,277	0.3181	117,785
COMRATS/BAS	156,330	1.7872	279,393
Total	526,607		397,178
Percent Of Present System		129,429 WR 25% Decrease *$341,758 Decrease	
Cost Per Ration	2.6405	2.2803**	
Food Costs (WR* Cost/Ration)	1,390,506	905,685	

*Average BDFA for CY 1976 was $2.6405

**Derivation of this figure is as follows:

This information presented in Table L–3 indicates the projected changes in headcount that would result from a BAS a la carte system at Travis AFB.

The cost per ration was less at NAS Alameda which was attributed to the a la carte financial controls which allows credit only for the food taken ($2.185 per ration per day) vs. the conventional system which allows the BDFA ($2.53 per ration per day.)

ASSUMPTION: The same percentage savings (2.53 – 2.185/2.53) that resulted at NAS Alameda will result at Travis AFB.

Therefore: $\frac{2.53 - 2.185}{2.53} = (\frac{0.345}{2.53}) = 0.1364$

Since for the Travis analysis, the average BDFA for CY 76 was 2.6405. The cost per ration for the BAS/SIK a la carte system at Travis AFB

= (BDFA) (1 – 0.1364) = (2.6405) (0.8636)

= $2.2803 per ration per day.

APPENDIX M

APPENDIX M

ANALYSIS OF BASE PERSONNEL ATTENDANCE UNDER A MODIFIED A LA CARTE SYSTEM AT THE TEST SITE, TRAVIS AIR FORCE BASE

This appendix presents the projected changes in attendance of the Appropriated Fund facilities at the test site under a Modified a la carte system. The attendance projections for each personnel category are presented, based on an a la carte test conducted by NARADCOM at NAS Alameda, for a modified a la carte system at the test site. Finally, the overall annual weighted rations projected for each enlisted population group under a modified a la carte system at the test site, Travis Air Force Base, are presented.

A cost analysis of Modified A La Carte was performed using the same assumptions used in the analysis of the BAS A La Carte System which is based on a NARADCOM test of a la carte operations at the NAS Alameda.

The populations and operating characteristics of NAS Alameda and Travis AFB are presented in Table L–1, Appendix L. The following analysis is based on the assumption that attendance rates at NAS Alameda for each subpopulation which are projected to result from implementation of a modified a la carte system will also result at Travis AFB. The projected changes in the attendance rates of the subpopulations after implementation of an SIK A La Carte system at NAS Alameda are presented in Table M–1.

Table M–1

Attendance Rates at NAS Alameda for an SIK A La Carte System

Sub-Population	(No.)	Attendance Rates Before	Attendance Rates After	Fractional Change
RIK	(245)	22.95%	22.95%	No Change
COMRATS-M	(1313)	1.02%	2.75%	Up 2.6666
COMRATS-S	(419)	5.82%	7.59%	Up 1.3041
COMRATS (Overall)	(1732)	2.18%	3.90%	Up 1.7872

The only attendance rates that change when shifting from BAS to SIK A La Carte operation is the subpopulation of SIK personnel. The attendance rate of this subpopulation instead of dropping to 32% of the original level when shifting from the conventional to BAS A La Carte will remain constant. It is assumed the SIK attendance rate will remain constant because the food service privileges of personnel who subsist on SIK remain the same in both the current system and under Modified A La Carte.

The fractional changes in the attendance rates shown in Table M–1 at NAS Alameda were used to calculate the projected attendance at Travis AFB for the Modified A La Carte system. The fractional change was then multiplied by the current system attendance rate to obtain the Modified A La Carte system attendance rate.

The projected attendance rate at Travis AFB if a Modified A La Carte system were implemented is shown in Table M–2. As shown, the overall headcount is expected to increase since SIK attendance remains constant and BAS attendance increases considerably.

Table M–2

Travis AFB Proposed SIK A La Carte

Sub-Population	Present Travis Attend.	Change At NAS Alameda	Projected TAFB Attend.
RIK/SIK	370,277	1.0000	370,277
COMRATS/BAS	156,330	1.7872	279,393
Total	526,607		649,670
Percent of Present System		123,063 W.R. 23% Increase *$324,948 Increase	
Cost Per Ration	2.6405		2.2803**
Food Costs (WR* Cost/Ration)	1,390,506		1,481,443

*Average BDFA for CY 76 was $2.6405

**Derivation of this figure is provided in Appendix L.